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Abstract

This study of resource sharing among public libraries was made possible by six library systems in northern Illinois. With the organization of the library systems and development of interlibrary loan services and other cooperative activities, the problem of extending resource sharing among member libraries and between library systems arose. Several library systems have initiated union catalogs and a primary consideration of this study has been the status and utility of those union catalogs. The study indicates that union catalogs for library systems will not be of much practical value in interlibrary loan services and that money and effort can be better expended in other directions. The direction with the greatest potential is automated centralized processing and cataloging. The cataloging performed by the Library of Congress and available in its catalog cards and Machine-Readable Cataloging (MARC) magnetic tapes is a means to avoid unnecessary cataloging duplication and provides a convenient tool for automated processing. (Author/CC)

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A BIBLIOGRAPHIC BANK FOR RESOURCE SHARING IN LIBRARY SYSTEMS: A FEASIBILITY STUDY

FINAL REPORT
REPORT NO. C8161-7

by
Eugene S. Schwartz
and
Henry I. Saxe

Prepared for

Bur Oak Library System
DuPage Library System
North Suburban Library System
Northern Illinois Library System
Starved Rock Library System
Suburban Library System

Information Sciences
IIT Research Institute
10 West 35th Street
Chicago, Illinois 60616

September 30, 1969

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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PREFACE

This study of resource sharing among public libraries has been made possible by the active interest and full cooperation of six Library Systems in Northern Illinois which number 190 libraries among their members. The study was performed by library and information scientists in the Information Sciences Section of IIT Research Institute in close collaboration with the Executive Directors of the six participating Library Systems. The Directors, Lou Anne Boone (Starved Rock), Jack Chitwood (Northern Illinois), Charles De Young (Bur Oak), Alice McKinley (DuPage), Robert McClarren (North Suburban), and Lester Stoffel (Suburban), helped to guide the study and coordinated data gathering from their member libraries. Thanks are due the many libraries and their staffs who answered questions, filled out questionnaires, counted books, and supplied the many data on which the study was based.

With the organization of the Library Systems and subsequent development of interlibrary loan services and other interlibrary cooperative activities, the problem of extending resource sharing among member libraries and between Library Systems has arisen. Several Library Systems have initiated union catalogs and a primary consideration of this study has been the status and utility of these union catalogs. Rather than initially asking questions concerning expansion and automation of the catalogs, the more basic question of their utility was investigated.

The study has shown, and we believe conclusively, that union catalogs for Library Systems will not be of much practical value in interlibrary loan services and that money and effort can be better expended in other directions. The direction with the greatest potential is automated centralized processing and cataloging. Many of the objectives that were sought from the union catalogs can be attained as a by-product of a centralized processing facility. The eventual goal of a regional library automation center that provides a host of services to member libraries is an attractive and challenging one.

The adoption of minimum standard cataloging and classification rules can be made to facilitate centralized processing while preserving the autonomy and individuality of libraries. The greatest mark of autonomy, in the long run, is the size and quality of a library collection and the services rendered to the patrons.

The high quality cataloging performed by the Library of Congress and available in its catalog cards and MARC (Machine Readable Cataloging) magnetic tapes is a means to avoid unnecessary cataloging duplication and provides a convenient tool for automated processing.

The interpretation of the data and the conclusions drawn therefrom are solely those of the authors of this report. We hope that an appropriate organizational framework will be developed and that plans for extending cooperative services will be forthcoming so that one of our most valuable public resources, books, will be more widely disseminated and used by the public the libraries serve.

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1. INTRODUCTION

This report presents the findings of a seven-month study that investigated the problems associated with resource sharing among member libraries of a Library System and among Library Systems. The study was sponsored by six Library Systems located across the northern tier of Illinois: Bur Oak, DuPage, North Suburban, Northern Illinois, Starved Rock, and Suburban Library Systems which number 190 public libraries among their members.

The Library Systems have been in existence for from one to three years and are acting in consort with the Illinois State Library in Springfield "to encourage the improvement of free public Libraries." Interlibrary cooperation for the purpose of sharing resources is a goal of each System and many achievements have already been scored in this direction.

The primary objective of the study was to investigate the feasibility of establishing a bibliographic bank for book collections that would serve the needs of individual libraries, the Library Systems, and the State Library. The ultimate purpose is to augment the services available to the public and to extend these services where they are not now available. The term bibliographic bank has been used as a generic term to describe a collection of bibliographic data without specifying, _a priori_, whether the form of the bank would be a union catalog, a bibliographic center, a switching center, a centralized processing facility, or some combination of these facilities.

It was clear from the outset of the study that resource sharing is dependent to a large extent on the exchange of information among libraries. The orientation of the study, accordingly, has been to associate conventional library approaches with the viewpoint of information processing. Information acquisition, processing, storage, and dissemination have been considered in the light of current library operations and the potentials afforded by developments in automated information systems.

Data for the study were obtained from eight sources:

1. Library profiles of member libraries detailing statistics on book collections, acquisitions, and other media; budgets; and personnel.
2. Interviews with Directors of the Library Systems and librarians of headquarters libraries.
3. Detailed system analysis of a "typical" library that participates in the Illinois Library Materials Processing Center (ILMPC) and a "typical" library that is not a member of ILMPC.
4. Detailed system analysis of the ILMPC.
5. Study of the interlibrary loan service of Library Systems.
6. Study of union catalogs of Library Systems.
7. Cataloging questionnaires.
8. Title duplication survey.

The number of libraries that have provided data is given in Table 1-1.

Table 1-1

DATA COLLECTION SUMMARY

Library System	Number Libraries	Profiles Received	Questionnaires Received	Title Check Lists Received[1]
Bur Oak	18	18	11	8 of 8
DuPage	21	21	21	8 of 8
North Suburban	28	28	28	12 of 12
Northern Illinois	52	52	31	12 of 12
Starved Rock	20	20	10	6 of 8
Suburban	51	47	46	12 of 12
Total	190	186	147	58 of 60

Note: [1] Sample size of Library System varied with number of member libraries.

The report is divided into 10 sections.

Section 2 is a statement of objectives of the study and a discussion of the framework in which the study was conducted.

Section 3 contains detailed descriptions of the Library Systems as presented in the library profiles, interviews, and cataloging questionnaires.

Section 4 summarizes cataloging practices of the six Systems.

Section 5 discusses the Illinois Library Materials Processing Center and presents data on its use by 53 of the 190 libraries.

Section 6 reviews System services in relation to reciprocal borrowing, interlibrary loan services, and System union catalogs.

Section 7 presents detailed data on a title duplication survey. The probability of overlap among a sample of libraries in each System (8 or 12 libraries) is displayed in overlap matrices. Similar studies are presented of the overlap between headquarters libraries and between these libraries and the four state Research and Reference Centers. The probability of nonoverlap is also presented for each of the above group of libraries.

Section 8 summarizes the findings regarding a bibliographic data bank by analyzing interlibrary loan data, the title duplication study, and the expected number of unique titles that would appear in various union catalogs.

Section 9 discusses centralized processing and shows the benefits of centralized cataloging and the development of several forms of a bibliographic data bank as a by-product of a centralized processing facility.

Section 10 contains a list of recommendations.

2. STUDY OBJECTIVES

We have previously defined a bibliographic bank as a collection of bibliographic data without specification of particular form. The main purpose of a bibliographic bank is to share scarce resources among a community of users. To share the resources it is necessary to establish an inventory, disseminate information about the inventory, and establish a mechanism for physical exchange of the resources. Corollary purposes are the elimination of duplication both in the physical resources and in the processing and exchange of the resources.

A number of specific objectives can be listed for a bibliographic bank.

1. Establish System inventories for internal use.
2. Establish a regional union catalog where the region may include a Library System, a group of Library Systems, the State Library System, or selected libraries within a defined region.
3. Establish a regional interlibrary loan service.
4. Assist in the book selection process of Systems and libraries.
    a. By indicating to Systems which subject areas should be supplemented in Systems' holdings.
    b. By indicating to individual libraries where planned acquisitions will overlap with holdings of nearby libraries.

5. Provide bibliographical data for cooperative cataloging.
6. Establish a cooperative acquisition program.
    a. In certain categories of books, one library will not acquire a book if another library has it.
    b. Distribute obligations to develop resources in selected fields in regional interest.
7. Establish a clearinghouse for local specialized bibliographical collections.
8. Establish a cooperative "last copy" program to prevent discard of titles unique to a region.
9. Establish a reference center.
    a. Maintain lists of books on designated subjects.
    b. Provide bibliographic information about designated books.
    c. Maintain files of nonbibliographic information.

While most of the objectives listed above are complementary, their scopes and the mechanisms for carrying out the objectives differ. Some objectives are independent and some are dependent on others.

The establishment of a union catalog, for example, is an independent objective and can be developed as a referral center. A regional interlibrary loan service can also be established as an independent objective although its association with a union catalog will facilitate interlibrary loans. The establishment of a "last copy" program is dependent on a union catalog.

Bibliographical data for cooperative cataloging can be provided by a cataloging center or can be handled in common by a centralized processing facility. A by-product of a centralized processing facility is a union catalog (at least of current acquisitions). Other by-products of a centralized processing facility are dependent upon the degree of automation of the facility. A computer-oriented facility, for example, could produce a book-form catalog or selected lists automatically from its bibliographic files.

Among the many objectives of a bibliographic bank, the Metropolitan System Directors have indicated that the establishment of regional interlibrary loan services (objective 3) would be of greatest benefit to the public the libraries serve. An inventory of member libraries' holdings (objective 4a) would be of benefit to the Library Systems in guiding their acquisition policies in supplementing the collections of member libraries. Objectives 6b and 7, the development of specialized collections by libraries or Library Systems and establishment of a clearing house for these specialized collections were also considered important.

Each of the six Library Systems participating in the study has an operating interlibrary loan service. The services are part of a state-wide activity organized under the Illinois State Library System. Under the State System, four large libraries have been designated as Research and Reference Centers from which public libraries can request book loans if these requests cannot be filled within a given Library System. The four centers, Chicago Public Library, State Library at Springfield, University of Illinois (Urbana), and Southern Illinois University, are being linked by teletypewriter with terminals in the Centers and Library System headquarters.

Four of the Library Systems have initiated System union catalogs to provide information for their interlibrary loan services. One Library System has centralized purchasing and all libraries have available to them the services of the Illinois Library Materials Processing Center. The latter is a centralized processing facility that serves approximately 200 public libraries, of which only 53 are in the six Library Systems participating in this study.

It is within the above framework of on-going System activities and State Library plans that this study has been conducted. Our aim has been to investigate plans for resource sharing that will meet the unique requirements of individual libraries and Library Systems in a coordinated system that can be developed over a period of time. We believe that automated information acquisition, processing, and dissemination methods should be examined closely to determine what potential benefits can be gained by linking conventional library practices to methods of the information sciences.

Plans for resource sharing should be capable of eliciting full cooperation from librarians and their staffs. The plans should be technically feasible in utilizing tested library and information processing equipment and techniques. The plans should finally be economically feasible so that development and operating costs can be supported by participating libraries, Library Systems, and the State Library and the benefits achievable by the plan are commensurate with the costs.

3. SYSTEM PROFILES

3.1 Area and Population

The six Metropolitan Library Systems (excluding the Chicago Public Library) are located across a northern tier of Illinois as shown on the map of Figure 3-1. Member libraries in each System are circled on the map. The 190 member libraries serve a population of nearly 2.5 million people spread over 11,115 square miles. The population served constitutes 80 percent of the population of this area.

The six Systems comprise a heterogeneous grouping that differs widely in the number of affiliated member libraries, populations, and area served as indicated in Table 3-1. The North Suburban System, for example, serves nearly three-quarters of a million people with 28 libraries in 625 square miles; the Northern Illinois System serves 407,000 people with 52 libraries scattered over 5,152 square miles.

The 190 libraries are located mostly in suburban or rural communities numbering less than 30,000 inhabitants. Forty-six percent of the member libraries are found in communities with less than 10,000 population. Only one library is in a community with more than 100,000 inhabitants.

The distribution of community size among the six library Systems is presented in Figure 3-3.

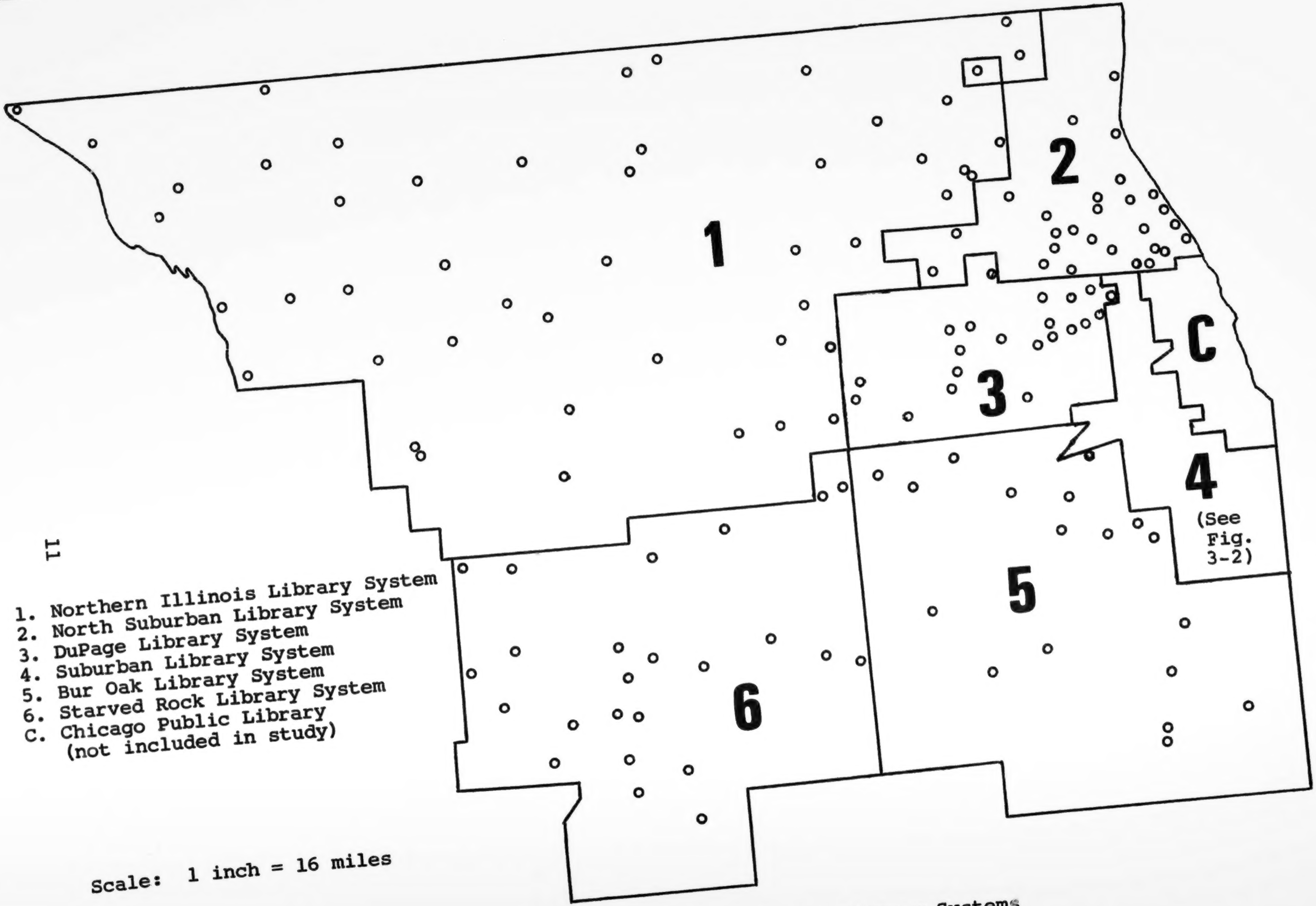
1
2
3
C
4
(See Fig. 3-2)
5
6
1. Northern Illinois Library System
2. North Suburban Library System
3. DuPage Library System
4. Suburban Library System
5. Bur Oak Library System
6. Starved Rock Library System
C. Chicago Public Library (not included in study)
Scale: 1 inch = 16 miles

Figure 3-1. Map of Libraries in Six Library Systems

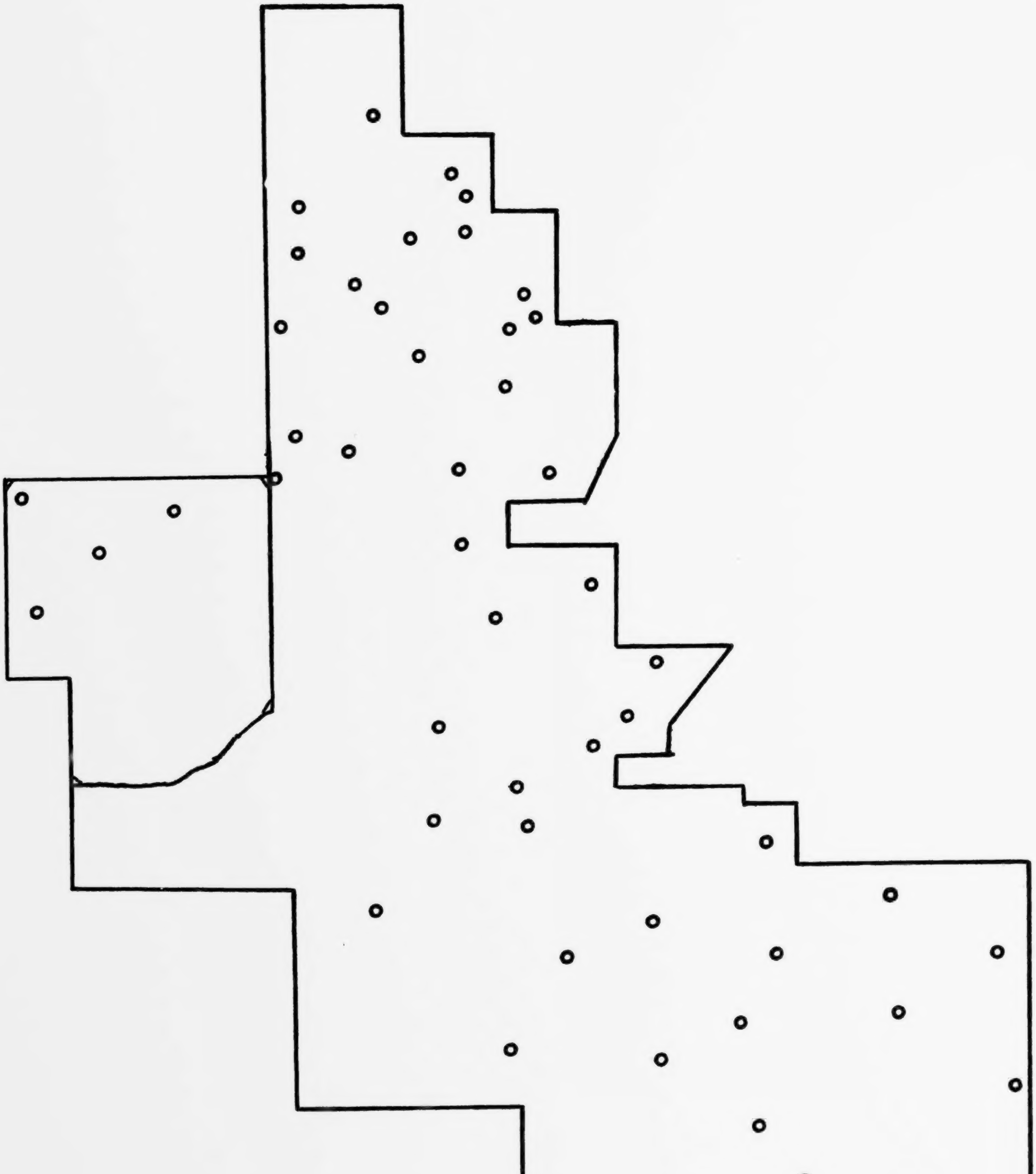

Figure 3-2. Detail Map Suburban Library System

Table 3-1

METROPOLITAN LIBRARY SYSTEMS

POPULATION AND AREA SERVED

Library System	Number of Libraries	Population credited to System by State Library	Population served by member libraries	Area served (square miles)
Bur Oak	18[1]	301,875	200,464	2,066
DuPage	21	285,261	245,098	612
North Suburban	28	814,384	734,597	625[2]
Northern Illinois	52[3]	565,210	428,454[3]	5,152
Starved Rock	20	122,364	80,271	2,119
Suburban	51[1]	970,861	763,422	541
Totals	190	3,059,955	2,452,306	11,115

Source: "The Emergence and Development of Public Library Systems in Illinois," Ralph H. Stenstrom, Illinois State Library Springfield, Illinois. Dec. 1968.

Notes:

[1] One library was added since Stenstrom report.

[2] Corrected and updated area.

[3] Two libraries were added since Stenstrom report.

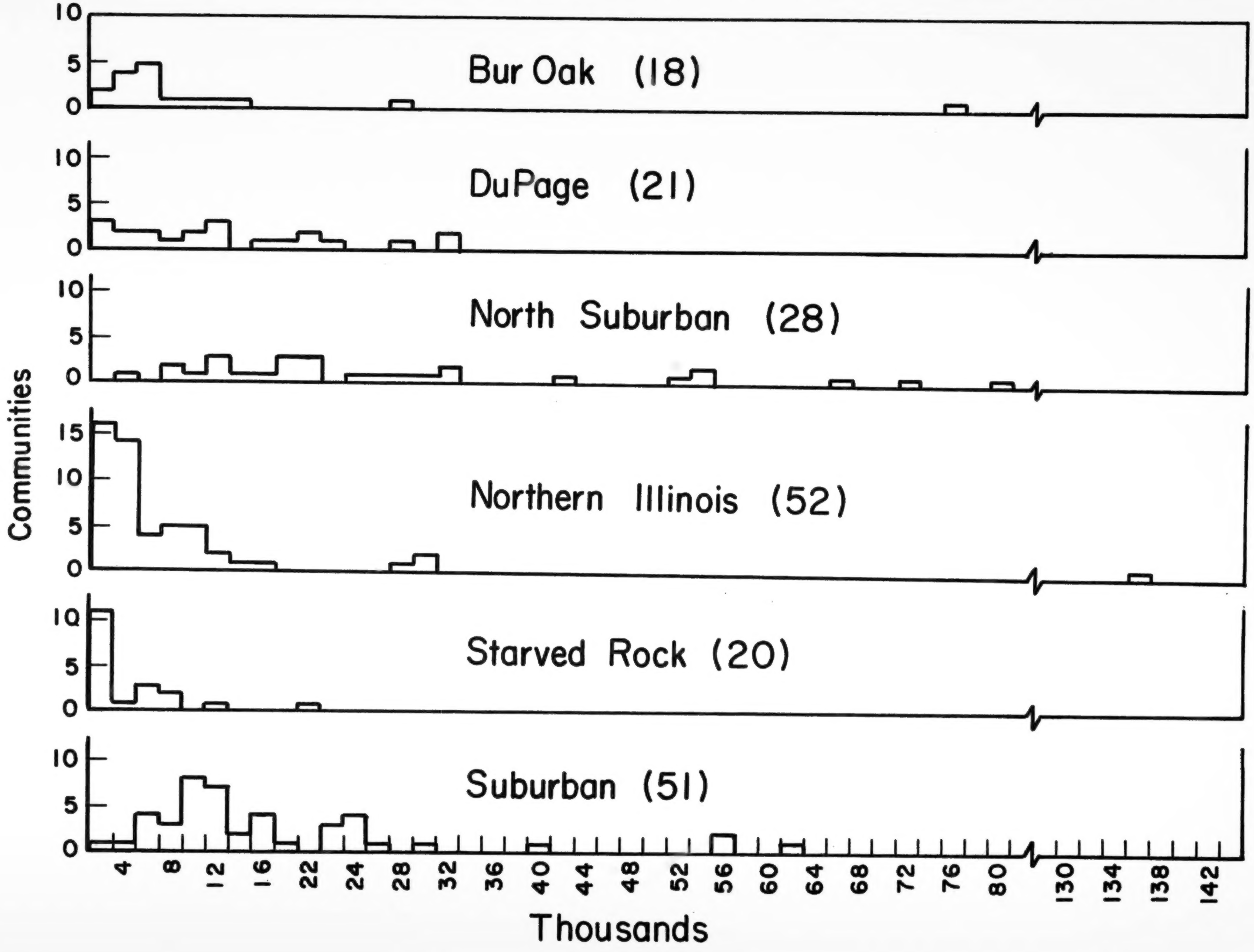

Fig. 3-3. POPULATION OF LIBRARY COMMUNITIES

3.2 Year of Founding

Libraries in the six Library Systems were founded over a period of 95 years. The Gail Borden Public Library in Elgin and the Evanston Public Library, both in the North Suburban Library System, were founded in 1873. The Acorn Public Library District in Oak Forest, a member of the Suburban Library System, opened its doors to the public on March 1, 1968. Twenty-five libraries were founded prior to 1900 and 30 were founded in the 1960's. The median year of library founding of the 190 libraries is 1932. The distribution of year of library founding of member libraries of the six Systems is shown in Table 3-2.

3.3 Book Collections

The size of book collections in the 190 libraries range from 1,498 volumes to 234,125 volumes (Table 3-3). The 20 libraries of the Starved Rock Library System have a median size collection of 7,912 volumes. The Bur Oak Library System follows with a median of 8,856 volumes. The median collection of Northern Illinois is 10,859 volumes, median of the DuPage Library System is 16,506 volumes, and median of the Suburban Library System is 18,333 volumes. The median collection of the North Suburban Library System, the highest of the six Systems, is 47,767 volumes.

Table 3-2

YEAR OF FOUNDING OF MEMBER LIBRARIES

Period	Bur Oak (18)	DuPage (21	North Suburban (28)	Northern Illinois (52)	Starved Rock (20)	Suburban (51)
1871-1875			2	1		1
1876-1880	1		1		1	
1881-1885		1	1	1		
1886-1890		1		4	2	1
1891-1895		2		4	1	
1896-1900	1	1	2			2
1901-1905	1		1	6	1	4
1906-1910		1	1	1		
1911-1915	3			5	1	1
1916-1920				2		2
1921-1925	1		3	5	1	
1926-1930	1	3	3	2		1
1931-1935		2		1	1	2
1936-1940	2	3	1	1	1	6
1941-1945	3		3	6		2
1946-1950						1
1951-1955		1	2	3		3
1956-1960		2	5	1		5
1961-1965	3	3	1	5		12
1965-	2	1				3
No Date			2	4	11	5

Table 3-3

BOOK COLLECTIONS OF MEMBER LIBRARIES

Library System	Number of Libraries	Range of Collections			Total	Estimated 1975
		Low	High	Median		
Bur Oak	18	1,498	90,174	8,856	315,897	444,000
DuPage	21	3,620	65,267	16,506	463,342	800,000
North Suburban[1]	28	14,015	234,125	47,767	1,587,781	2,613,000
Northern Illinois[2]	52	1,843	227,930	10,589	981,869	1,125,000
Starved Rock	20	2,194	52,984	7,912	248,427	375,000
Suburban	51	2,000	135,278	18,333[3]	1,462,213	2,150,000
Totals	190				5,059,529	7,507,000

Notes: [1] Data from one library not included.

[2] Data from two libraries not included.

[3] Data from six libraries not included.

Total book holdings of member libraries in a System range from 248,427 volumes in the 20 libraries of the Starved Rock Library System to 1,587,761 volumes held by the 28 libraries in the North Suburban Library System. The average size of a book collection in the North Suburban Library System, 56,700 volumes, is nearly five times the 12,400 volumes in an average library of the Starved Rock Library System.

By 1975, projected growth of member library holdings will bring the total collection of the 190 libraries to 7,507,000 volumes.

The distribution of size of book collections among the six library systems is shown in Figure 3-4.

3.4 Annual Book Acquisitions

The pattern of widespread variation between member libraries of a System and between Systems also holds true for annual book acquisitions. The number of books acquired by libraries in the fiscal year 1967/1968 ranged from 48 to 19,452 volumes (Table 3-4). Median acquisitions in the Systems ranged from 407 to 4,446 volumes.

The total of acquisitions for the 190 libraries was 443,161. Annual acquisitions are estimated to be 611,000 for 1975.

The distribution of book acquisitions by member libraries is shown in Figure 3-5.

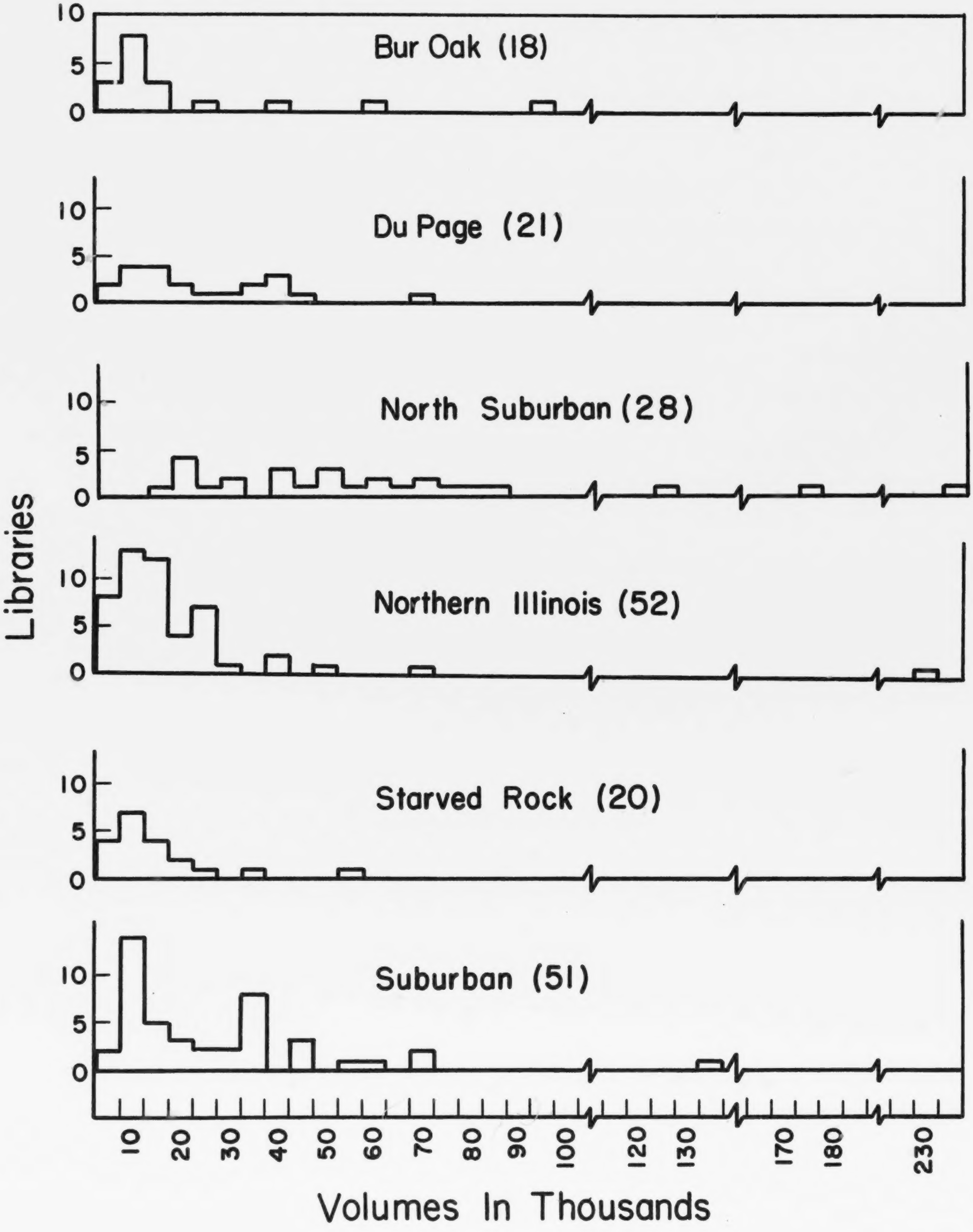

Fig. 3-4. BOOK COLLECTIONS OF MEMBER LIBRARIES

Table 3-4

BOOK ACQUISITIONS OF MEMBER LIBRARIES

1967/1968

Library System	Number of Libraries	Range of Acquisitions			Total	Estimated 1975
		Low	High	Median		
Bur Oak	18	55	6,279	782	22,457	25,000
DuPage	21	171	6,506	1,445	56,183	70,000
North Suburban	28	182	19,452	4,446	157,945	212,500
Northern Illinois	52	48	17,088	676	70,638[1]	166,000
Starved Rock	20	50	3,137	407	12,438	12,500
Suburban	51	683	10,736	2,398	123,500	125,000
Totals	190				443,161	611,000

Note: [1] Data from two libraries not included.

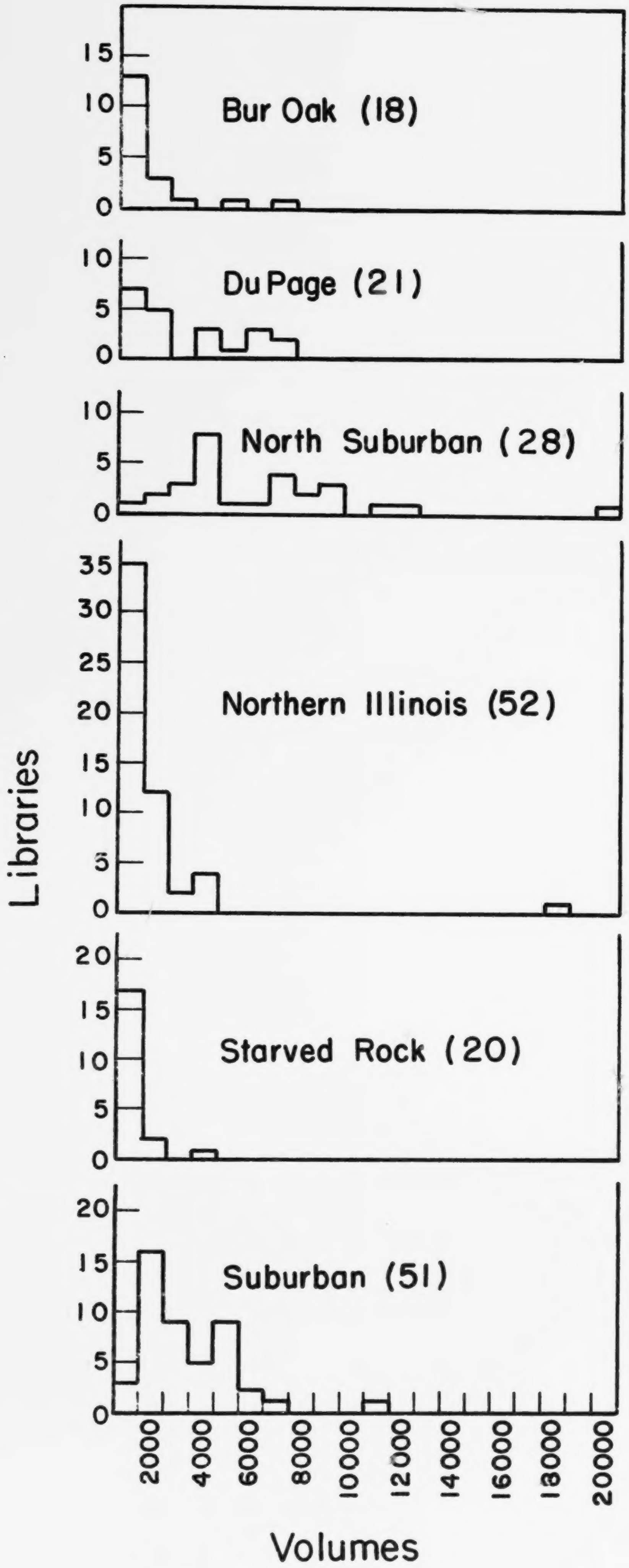

Fig. 3-5. BOOK ACQUISITIONS OF MEMBER LIBRARIES 1967/1968

3.5 Book Budgets

Book Budgets of individual libraries for the fiscal year 1967/1968 ranged from a low of $92 to a high of $91,583, nearly 1,000 times the lower figure (Table 3-5). Median book budgets fall into three levels. Starved Rock, Northern Illinois, and Bur Oak Library Systems are in the lower level with median budgets of $1,243, $1,255, and $1,754 respectively. DuPage and Suburban Library Systems are in an intermediate level with medians of $7,600 and $8,500 respectively. North Suburban Library System is at the top level with a median budget of $18,096.

Per capita support based upon the total expenditures of member libraries (exclusive of State aid) divided by the population served, varies from $2.02 in the Bur Oak Library System to $4.23 in the North Suburban Library System.

Although the book budget is the largest item in library budgets for library materials, many libraries have budgets for serials, films, art works, and recordings. The range of these budgets is greater, in a relative sense, than the book budgets inasmuch as many of the smaller libraries expend little or nothing on other media.

3.6 Personnel

Personnel resources of the six Library Systems vary greatly. Some of the smaller libraries are staffed by nonprofessionals many of whom are volunteer workers. Larger libraries have

Table 3-5

BOOK BUDGETS OF MEMBER LIBRARIES

1967/1968

Library System	Number of Libraries	Range of Budgets(Dollars)			Per Capita Support[1] (Dollars
		Low	High	Median	
Bur Oak[2]	18	201	31,500[3]	1,754[3]	2.02
DuPage[4]	21	500	34,500	7,600	3.48
North Suburban	28	947	91,583	18,096	4.23
Northern Illinois	52	92	73,124	1,243	3.03
Starved Rock[5]	20	219	16,000	1,255	2.82
Suburban[6]	51	2,940	43,411	8,500	2.34

Notes:

[1] Total expenditures of member libraries (exclusive of State aid) divided by population served.
Source: Stenstrom, op. cit.

[2] Data from two libraries not included.

[3] Does not include $40,000 budgeted for book acquisitions of newly established branch library.

[4] Data from one library not included.

[5] Data from four libraries not included.

[6] Data from six libraries not included.

professional staffs with separate acquisitions - processing, cataloging, circulation, and interlibrary loan personnel. In smaller libraries, a single individual may fill all or most of these positions.

Libraries may be open to the public for only several hours a week or a day in smaller communities. Sixty-eight hours operation per week is the rule in most of the larger libraries. Staffs of part-time and volunteer workers augment full-time staffs in many libraries.

4. CATALOGING PRACTICES

A cataloging questionnaire was designed and distributed to 190 public libraries to determine their cataloging practices, standards, sources of catalog cards, authority lists, and associated data. A copy of the questionnaire appears in Appendix A.

Questionnaires were returned by 147 libraries or 77 percent of those queried.

4.1 Classification

All respondents that classify their books use the Dewey Decimal Classification. The depth of classification varies from zero to three decimal places. Most libraries classify to two decimal places. Several small libraries do not classify their books.

Most libraries use the current 17th edition of Dewey, although some use previous editions back to the 14th. A number of libraries use the 7th, 8th, and 9th Abridged Editions. Several libraries use simplified guides to classification.

In cases where the latest DDC edition varies from previous editions, many libraries follow existing classifications to avoid having to reclassify books classified under the former classifications.

Sixteen percent of respondents use Cutter numbers. Thirty-four percent of respondents use the surname initial of the author and 21 percent use the initial three letters of an author's surname in the call number. Several libraries use the initial two letters of the author's surname and the remaining libraries do not use any additional identification.

4.2 Source of Catalog Cards

The source of catalog cards was given by 138 libraries. A summary of the data is presented in Table 4-1.

Table 4-1

SOURCES OF CATALOG CARDS

Percentage of Cards from Source	Number Libraries Obtaining Cards from Source		
	ILMPC	Card Services	By Library
1-10	4	26	10
11-20	1	11	13
21-30	3	12	15
31-40	2	7	8
41-50	6	5	9
51-60	3	4	7
61-70	4	5	8
71-80	13	8	13
81-90	1	3	11
91-99	3	1	8
100	2	2	32
Total[1]	42	84	134

Note: 1. Grand total is greater than 138 reporting libraries because most libraries obtain cards from several sources.

Only four libraries do not prepare any of their catalog cards; two libraries receive all their cards from the ILMPC and two from catalog card services. Thirty-two libraries catalog 100 percent of their acquisitions utilizing their own staffs. The libraries that do more than 50 percent of their own cataloging number 79, or 57 percent of the respondents. A total of 134 libraries out of 138 do some cataloging.

Eighty-four libraries obtain catalog cards from commercial card services. Twenty-three libraries receive more than half of their catalog cards from the card services, 37 libraries receive not more than 20 percent of their cards from this source.

H. W. Wilson Co. catalog cards are used in 48 of the reporting libraries. Library of Congress catalog cards are used in 37 libraries. Other card sources are Catalog Card Corp. of America, Library Journal, Alanar, Bro-Dart, and cards that are enclosed in the books supplied by various publishers.

Tables on the percentage of catalog cards obtained from various sources by member libraries of the six Library Systems appear in Appendix B.

A discussion of the ILMPC appears in Section 5.

4.3 Cataloging Information

Respondent libraries use many sources for cataloging information. The most frequently used source is American Book Publishing Record, followed by Booklist and Book Review Digest. A minority of libraries use Library of Congress proof sheets or the National Union Catalog.

For subject heading authority, 82 percent use Sears List of Subject Headings and 28 percent use the Library of Congress List of Subject Headings.

4.4. Cataloging Standards

In general, most libraries follow the Anglo-American Cataloging Rules or the ALA Cataloging Rules for Author and Title Entries. However, there are a number of local exceptions and variances. The use of added entries and tracings varies widely among libraries, the larger libraries usually adding more entries and tracings.

For example, the manner of cataloging books in cases where the author uses a pseudonym varies as does the designation of editions and series.

As a result of these variances and exceptions and the different sources of catalog cards, a collection of cards from a number of libraries would represent a heterogeneous rather than a uniform collection.

4.5 Contents of a Union Catalog

Libraries were queried on the data elements that were recommended for inclusion in a union catalog (question 36 of the questionnaire). The following items were almost unanimously designated as "1" (essential):

1. Dewey classification number
2. Author
3. Title
4. Holding library

Publisher and date received a large majority of "1" ratings. All other listed data elements received varied ratings.

Question 37 of the cataloging questionnaire requested a ranking of categories of books that should appear in a union catalog. Adult nonfiction was almost unanimously ranked as an essential component. Adult reference books followed closely, almost all libraries checking this category as essential, with a few "2's" (useful but not a must). A large majority, 84 out of 128, would include adult fiction in a union catalog, although there were 37 "2" designations and 7 "3's" (a category that could be eliminated).

Opinion on the inclusion of children's books was divided: 64 rated this category "1," 39 rated it "2," and 23 rated it "3."[1]

Foreign language books were rated "1" by 57 respondents, "2" by 49 respondents, and "3" by 12 respondents.

Large print books were rated "2" by 50, "1" by 49, and "3" by 12 respondents.

Paper bound books were generally ranked as "3" with a slightly lower number of "2's" and a scattering of "1's."

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[1] Totals are not consistent because some respondents left the questions blank or only checked selected items

5. ILLINOIS LIBRARY MATERIALS PROCESSING CENTER (ILMPC)

5.1 Development of ILMPC

The Illinois Library Materials Processing Center (formerly Oak Park Book Processing Center) began operation in May, 1964 with a staff of 17 full-time employees. First members were 28 public and school libraries who were offered complete ordering, classification, cataloging, and mechanical preparation of book materials. Each member contracted to spend at least 75 percent of its annual book budget through the Center.

Although nearly 47,000 books had been processed and shipped during the first year of operation, serious problems of staffing, a backlog of unprocessed materials, and the necessity for differential processing of school materials arose. More serious was the problem of not meeting costs and incurring a debt. Subsidies from the State Library assisted financially and the Oak Park Public Library provided additional assistance by assuming the cost of rent and utilities.

A new Director took over administration of the Processing Center in March, 1966. Processing routines and procedures were re-evaluated and cataloging and classification rules were simplified and standardized. The backlog was eliminated and a rationalization of clerical procedures permitted a reduction in the staff while increasing the productivity of the Center. Although the financial picture improved and per-book costs were reduced, the Center was not yet self-supporting.[1]

During 1966 the Center shipped 70,653 books to libraries at an average cost of $2.26 per book, a sizeable reduction from the $3.30 per book cost that prevailed in the first years of the Center. The cost was further reduced to $2.04 per book in 1967 when 88,068 books were processed. The cost to member libraries was $1.20 per book in 1966 and 1967. The cost was raised to $1.30 per book in 1968. Subsidies made up the difference between operating costs and charges made to libraries.[2]

In fiscal year 1967 (July 1967-June 1968), 130,000 books were processed and a target goal of 170,000 books was set for fiscal 1968. Twenty-seven libraries order books directly from the Center and the remainder of the 230 member libraries order through their Library Systems. Seven Library Systems order System books through the Center.[3]

No detailed inventory of the number of master cards is available, but based upon the number of volumes processed since the Center started operation, it is reasonable to estimate that more than 200,000 books have been cataloged. Master cards are stamped on the back with code letters designating member libraries and Systems. An "X" is marked for the requesting library when a master card is reused or a new master card is originated. Thus a great number of titles with library locations are available to form the basis of a multisystem union catalog.

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[1] Clayton Highum, "Centralized Processing for Public Libraries in Illinois," Illinois State Library, Springfield, Illinois, June 1967. pp. 16-20.

[2] Charles A. Craft, "Evaluation of Operations and Potential of the Oak Park Processing Center," Subcommittee for Title One and Two, Illinois State Library Council, May 10, 1968. p. 4, (Unpublished report).

[3] Interview with Margaret Shreve, Director, Illinois Library Materials Processing Center, March 11, 1969.

At the time of writing of this report, the Processing Center has been designated as the ILMPC and a new reorganization is being planned. The reorganization involves a change in location from the Oak Park facility and new management.

5.2 Usage of ILMPC by Libraries

One of the causes of the financial problem of the Processing Center is the selective use of the Center by member libraries. Whereas the Center cost per-book is predicated on an average cost of simple and difficult cataloging and processing of books, member libraries have tended to catalog and process books that require little effort by themselves. As a consequence, the Center has processed mainly books that require substantial cataloging and processing effort.

It has been estimated that in 1968, only approximately 16 percent of books processed were in the fiction category and 84 percent in the nonfiction category. Adult nonfiction comprised about 74 percent of the total.[4] Discussions with libraries confirmed the above practice whereby most children's books, fiction, replacement titles, and multiple copies were handled directly by the libraries. Book sets such as encyclopedias were also usually handled by the library inasmuch as only one set of catalog cards would be required and the Processing Center would charge for each volume of the set.

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[4] Interview with Margaret Shreve, Director, Illinois Library Materials Processing Center, March 11, 1969.

A summary of the book processing policies of 41 of the 53 libraries affiliated with ILMPC from the six Library Systems participating in this study is given in Table 5-1. The 53 participating libraries comprise only 28 percent of the 190 libraries and in 1968 acquired 31 percent of all books acquired by the 190 libraries. Only 68 percent of books acquired by participating libraries are processed through ILMPC. Participating libraries of the Northern Illinois Library System process 41 percent of acquired books through ILMPC. DuPage, North Suburban, and Suburban participating libraries process from 71 to 73 percent of their acquired books through ILMPC. Bur Oak and Starved Rock Library Systems both have only one participating library with 100 and 99 percent processing, respectively. Detailed tables of individual participating libraries appear in Appendix C.

Of the 41 reporting libraries, only two have 100 percent of their books processed by ILMPC. Nineteen libraries process 75 percent or more of their books through ILMPC. The remainder process from as low as 5 percent to 70 percent. The median of books processed through ILMPC by the 41 libraries is 71.7 percent.

TABLE 5-1

VOLUMES PROCESSED AT ILLINOIS LIBRARY MATERIALS PROCESSING CENTER BY MEMBER LIBRARIES

Library System	Libraries in System	Libraries in ILMPC		Acquisitions-All Member Libraries	Acquisitions-Libraries in ILMPC		Volumes Processed by ILMPC	% Source of Catalog Cards of Libraries in ILMPC		
		No.	%		Volumes	%		ILMPC	Card Services	Library
Bur Oak	18	1	6	22,457	4,093	18	4,093	100	-	-
DuPage	21	6	29	56,183	32,460	58	23,620	73	4	23
North Suburban	28	5	18	157,945	21,479	14	15,137	71	< 1	29
Northern Illinois[1]	52	23	44	70,638	24,024	34	9,884	41	28	31
Starved Rock	20	1	5	12,438	3,137	25	3,106	99	-	1
Suburban[2]	51	17	33	123,500	53,048	43	37,435	71	4	25
Totals	190	53	28	443,161	138,241	31	93,275	68	7	25

Notes: [1] Data available from 14 out of 23 libraries.
[2] Data available from 16 out of 17 libraries.

The figures above corroborate that participating libraries use ILMPC on a selective basis where an economic advantage appears to be obtainable but still maintain their own acquisition, processing, and cataloging departments in parallel to process nearly a third of acquired books. This compromise has seriously affected the operations of ILMPC and denies participating libraries the full benefits of cooperative acquisitions, processing, and cataloging.

5.3 Response to ILMPC

There appears to be no pattern of library membership in ILMPC with regard to either age or size of libraries. In the DuPage Library System (Table C-2), for example, the Geneva Township Public Library which was founded in 1894 is a member as is the Sugar Grove Public Library which was founded in 1962. Sugar Grove is one of the smallest libraries in the Library System and shares membership with the Wheaton Public Library, the headquarters library with the largest collection in the System. Similar variations of library membership in ILMPC are found in the Northern Illinois (Table C-4) and Suburban (Table C-6) Library Systems.

Although the reluctance of long established libraries to forego their own traditional cataloging and processing activities can be appreciated, it might have been anticipated that newly founded libraries would avail themselves of the benefits of centralized processing. Cost reductions arising from cooperative purchasing and the freeing of scarce personnel resources for direct service of the public would appear to be advantageous to new libraries faced with budgetary and personnel constraints.

Of the 30 libraries founded in the six Library Systems since 1960 (Table 3-2), however, only six libraries have become members of ILMPC. Of the six libraries founded since 1965 when the Processing Center was already in existence, not a single library has joined ILMPC.

Thirty-five libraries that are members of ILMPC responded to question 10 of the questionnaire that asked about changes made in catalog cards received from the Processing Center. A little more than half of the respondent libraries, 19, reported no changes were made in the catalog cards received from the Center. The other 16 libraries reported some changes were made in received cards although most libraries qualified the frequency of change with "occasionally."

Several libraries indicated that they corrected occasional errors in classification or cataloging. Several libraries changed books marked "R" (reference) to circulation, and vice versa. A reversal of categories from "J" (juvenile) to adult and vice versa was also indicated by several libraries. One library classified all juvenile "books of fact" (nonfiction).

The most common change was in classification or subject headings when the cards received from the Processing Center did not conform to classifications or headings currently in use in the libraries. Subject cards were often added by the recipient library and cross references were added on occasion by several libraries. One library replaced the first three letters of a biographer's surname with the full name. One library simplified Library of Congress card headings when they were "too sophisticated."

A common complaint about received catalog cards is the poor printing quality.

6. SYSTEM SERVICES

"The major goal of the library systems is to improve the access which people have to adequate library resources and services. This involves first the building of strong resources and services, and secondly, insuring that they are truly accessible...Among the most frequently suggested means for improving access to adequate library service were reciprocal borrowing privileges with the patron being allowed to return books to any library in the system, interlibrary loans, bookmobile service, and the establishment of service outlets or deposit stations in areas without library service."[1]

The services cited above are in various stages of development within the six Library Systems studied in this report. We will discuss those services that are related to a bibliographic bank in this section. The services are: reciprocal borrowing and interlibrary loans. Associated with interlibrary loans are the union catalogs under development by four Library Systems.

Several of the Library Systems have lending services for films and other audio-visual aids. At least two of the Systems are planning intersystem film lending services. Text copying, art lending programs, and general reference services are also provided by several of the Systems. We have not included a discussion of these other media, or problems associated with serials, in order to concentrate on the main service of the library, the lending of books.

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[1] Stenstrom, op. cit., p. 34.

6.1 Reciprocal Borrowing

Reciprocal borrowing is a goal of each Library System. The Northern Illinois Library System instituted reciprocal borrowing early in its System activities. The Starved Rock Library System was to have initiated reciprocal borrowing in the summer of 1969. Several systems employ courtesy cards on a rather restricted basis that permit patrons in one community to borrow books from a library in another community.

In heavily populated areas such as the North Suburban and Suburban Library Systems, reciprocal borrowing would provide the greatest service if a location service were available. A patron seeking a book would use the location service to ascertain which library(ies) held a desired book and could select the nearest library for borrowing. A union catalog, preferably a book catalog, would be of greatest help as a locator tool.

6.2 Interlibrary Loan Service, Union Catalog, Centralized Purchasing

6.2.1 Bur Oak Library System

In the period January through December, 1968, the Bur Oak Library System received 1,346 requests for books from its interlibrary loan service. Of these, 1,222 requests or 90.8 percent were filled. The sources of filled loans are given in Table 6-1.

Slightly more than 75 percent of filled requests were filled within the System, over 74 percent being filled from the Joliet Public Library, headquarters library of the System. The remainder of filled requests were from the System collection and from member libraries.

Nearly a fourth of the filled loans were made by the R and R centers of which the Chicago Public Library supplied the largest portion of loans. The three other R and R centers together filled less than 5 percent of the requests.

Sixteen of the 18 libraries in the Bur Oak Library System participate in the System's centralized purchasing activity. Purchase orders are pooled and books are purchased to take advantage of available discounts. Books are not processed by the System, however, but are forwarded to libraries where preparation of the books for circulation or reference takes place. Approximately 40 percent of member libraries' acquisitions are channelled through centralized purchasing.

Only one library has been a contractee of the Illinois Library Materials Processing Center but is considering dropping the contract because of alleged slow service.

The basis for a system union catalog has been established by the Bur Oak Library System's centralized purchasing activity which prepares a main entry card for each book purchased.

Table 6-1

INTERLIBRARY LOAN SERVICE
BUR OAK LIBRARY SYSTEM
January-December, 1968

	Requests	%
Requests Filled	1,222	90.8
Unable to Fill[1]	124	9.2
Total Requests	1,346	100.0
Loan Source: System[2]		
Joliet Public Library	906	74.1
Bur Oak Collection	17	1.4
Total From System Resources	923	75.5
Loan Source: Other[2]		
Chicago Public Library	218	17.8
Illinois State Library	27	2.2
University of Illinois	10	0.8
Southern Illinois University	19	1.6
Other	25	2.1
Total From NonSystem Resources	299	24.5

Notes:

[1] Figure does not include 182 subject requests.

[2] Percentages are requests filled by loan source divided by total number of filled requests.

Approximately 5 percent of books are accompanied by dealer-supplied catalog cards. A classification number is also assigned. A copy of the card is maintained in a central catalog as a cumulative record of system purchases for member libraries. It is estimated that about 15,000 cards have been accumulated in one year's operation.

No record has been kept to date of the libraries that ordered the books in the central catalog. Hence, while it is known whether or not a specified book is held within the system, its specific location(s) is unknown. When a book is purchased, a check of the catalog indicates whether or not it is necessary to prepare a new catalog card. Reorders of books already in the catalog are currently running at about 20 percent.

The inclusion of library locations on the back of the central catalog cards would furnish an important datum for a union catalog and interlibrary loan service. It should be noted, however, that 60 percent of member libraries' acquisitions do not pass through centralized purchasing so that less than half of new acquisitions would appear in the system catalog. No plans have been made for establishing a union catalog that would include current acquisitions of libraries that purchase outside of the centralized plan, or that would include titles in collections held prior to the initiation of System purchasing.

6.2.2 DuPage Library Systems

In the period September 3, 1968 through April 30, 1969, the DuPage Library System handled 3,423 requests of which 1,966 (57.4 percent) were filled. Requests included book loans and copy of microfilm or test material. Monthly book requests ranged from 226 to 528, with the number of requests rising in the last four consecutive months. During these four months, 76.2 percent of book requests were filled. In March and April 1969, filled requests for book loans were 79.4 and 93.9 percent of received requests indicating that the capability to fill requests was increasing together with the rise in the number of requests.

Table 6-2 presents interlibrary loan statistics for the period January-April 1969. It is interesting to note that the Wheaton Public Library, which serves as System Headquarters, filled 35.5 percent of book requests and led all other supply sources. The Chicago Public Library was the second largest supplier of books for loan, meeting 25.9 percent of the requests. The other 20 libraries of the DuPage Library System filled 17.3 percent of the filled requests. The remainder of the loans were obtained from the Illinois State Library in Springfield or "other" sources.

The DuPage Library System started a union catalog in 1967 when 11 libraries were members of the System. The union catalog is housed in the Wheaton Public Library and is staffed by a reference/interloan librarian. Member libraries forward to the

Table 6-2

INTERLIBRARY LOAN SERVICE
DUPAGE LIBRARY SYSTEM
January-April, 1969

	January		February		March		April		Total	
	Requests	%	Requests	%	Requests	%	Requests	%	Requests	%
Requests[1]	447		534		541		528		2,050	
Requests Filled	275	61.5	361	67.6	430	79.4	496	93.9	1,562	76.2
Unfilled[2]	34	7.6	53	9.9	88	16.3	59	11.2	234	11.4
Loan Source: System[3]										
Wheaton Public Library	77	28.1	140	38.8	159	37.0	178	35.9	554	35.5
DuPage System Libraries	41	14.9	81	22.4	70	16.3	79	15.9	271	17.3
Total From System Resources	118	43.0	221	61.2	229	53.3	257	51.8	825	52.8
Loan Source: Other										
Chicago Public Library	85	30.9	80	22.2	115	26.7	124	25.0	404	25.9
Illinois State Library	47	17.1	29	8.0	49	11.4	72	14.5	197	12.6
R & R Centers and Other	25	9.0	31	8.6	37	8.6	43	8.7	136	8.7
Total From NonSystem Resources	157	57.0	140	38.8	201	46.7	239	48.2	737	47.2

Notes: [1] Does not include copy service.
[2] Not in any locatable collection or not available at time of request.
[3] Holding library identified by union catalog; requests filled by source divided by total requests filled.

union catalog a catalog card with the main entry of each title purchased. Duplicate copies are compared for discrepancies and variations and a single card is selected for the title; duplicates are then discarded. Of 1,400 cards received from member libraries in April 1969, 650 were duplicates of cards currently received or already in the file.

Approximately 25,000 cards are now on file in the union catalog. Each card is stamped on the back with the code letters of member libraries and a check mark indicates which libraries have the book. No specific provisions have been made for denoting withdrawn or lost books by member libraries.

Inasmuch as 21 libraries are now members of the DuPage System, and only 11 were members at the time of inception of the union catalog, the catalog does not represent a uniform starting date for new acquisitions. Plans for entering cards of books held prior to the formation of the union catalog have not been made, nor have plans been made to develop standard cataloging rules to ensure uniformity of entries to the catalog.

6.2.3 North Suburban Library System

The North Suburban Library System processed 10,812 requests in its interlibrary loan service during the twelve-month period January 1968 to January 1969. Detailed loan statistics are shown in Table 6-3. During this period, 83.6 percent of the requests were filled, 7.5 percent were cancelled (unfilled) and the remainder were in process.

Table 6-3

INTERLIBRARY LOAN SERVICE
NORTH SUBURBAN LIBRARY SYSTEM
January 29, 1968-January 28, 1969

	Requests	%
Requests Filled	9,043	83.6
Cancelled or Unfillable	816	7.5
In Process	953	8.9
Total Requests	10,812	100.0
Loan Source: System[1]		
Evanston Public Library	4,917	54.4
North Suburban System	633	7.0
Total From System Resources	5,550	61.4
Loan Source: Other[1]		
Chicago Public Library	2,005	22.2
R & R Centers	1,410	15.6
Other	76	0.8
Total From NonSystem Resources	3,491	38.6

Notes: [1] Requests filled by loan source divided by total number of filled requests.

Loans from System resources were 61.4 percent of total requests filled. The headquarters library, Evanston Public Library, filled 88.6 percent of the System's loans. The North Suburban System contributed 7 percent of total requests filled.

The Chicago Public Library was the major nonsystem loan source, providing 22.2 of the total number of loans. The remaining three R and R Centers together filled 15.6 percent of the total filled requests.

The North Suburban Library System has recently initiated a union catalog made up of monthly contributions of main entry cards sent in from all member libraries. All duplicate cards are retained and filed. Thus one entry can have bibliographic information as it appears on different printed cards, in variant forms as cataloged by different libraries, and with different call numbers as assigned by the various libraries. In theory, a popular title could be represented by 28 cards, one from each member library.

The cards are for current acquisitions only and total over 50,000. The growth rate of approximately 7,000 cards per month includes adult fiction and nonfiction. Nearly half of the monthly input of cards represent unique titles.

To date no plans have been made for elimination of duplicate cards, for standardization, for input of cards of books acquired prior to inception of the union catalog, or for eliminating cards of withdrawn books.

The union catalog is housed at the headquarters library in the Evanston Public Library and is used in the System's interlibrary loan service.

6.2.4 Northern Illinois Library System

The Northern Illinois Library System received 18,728 requests during the fiscal year July, 1968 to June, 1969 as shown in Table 6-4. Eighty-five percent of the requests were filled. The Rockford Public Library, headquarters library of the System, supplied 93.6 percent of the 15,923 filled requests. The four Rand R Centers supplied 6.4 percent of the filled requests. The Illinois State Library led the other R and R Centers in filling 2.5 percent of the filled requests.

6.2.5 Starved Rock Library System

The reference and Interlibrary Loan Service of the Starved Rock Library System was begun in December, 1967. As more libraries use the service, the nature of requests has become more technical and the capability of the system to fill requests has dropped. A major outside source of loans is the Chicago Public Library. The Illinois State Library and the other R and R Centers are also utilized.

A statistical summary of loans in the period January to June, 1969 appears in Table 6-5. More than 4,100 books were issued to member libraries on indefinite loan from the System collection. In addition, 4,022 requests for specific titles

Table 6-4

INTERLIBRARY LOAN SERVICE
NORTHERN ILLINOIS LIBRARY SYSTEM
July 1, 1968-June 30, 1969

	Requests	%
Total Requests	18,728	
Requests Filled	15,923	85.0
Average Monthly Requests Filled[1]		
Loan Source: System		
Rockford Public Library	1,561	93.6
Loan Source: Other[1]		
Illinois State Library	42	2.5
Chicago Public Library	28	1.7
University of Illinois	20	1.2
Southern Illinois University	16	1.0
Total From Nonsystem Sources	106	6.4

Notes: [1] Percentages are average monthly filled requests divided by total average monthly requests.

were filled. The headquarters library and the System collection filled 75.5 percent of these requests, the four R and R centers filled the remaining 24.5 percent.

Table 6-5

INTERLIBRARY LOAN SERVICE
STARVED ROCK LIBRARY SYSTEM
January-June, 1969

	Requests	%
Long-term Loans to Libraries From System Collection	4,120	
Requests Filled[1]	4,022	
Loan Source: System[2]	3,038	75.5
Loan Source: Other[3]	984	24.5

Notes: [1] Includes books, pamphlets and documents; loan period is 21 days.

[2] Reddick's Library at Ottawa, headquarters library, and System collection.

[3] Includes four R and R centers; breakdown is not available.

6.2.6 Suburban Library System

The interlibrary loan service of the Suburban Library System was started in February, 1968 in conjunction with initiation of a System union catalog. The number of requests has been constantly increasing and the rate of request fulfillment has been relatively constant.

Table 6-6 lists interlibrary loan statistics for the first four months of 1969. A total of 6,435 requests was processed during this period of which 74.1 percent were filled and 12.9 percent cancelled (unfilled). Nearly 65 percent of the loans were filled within the System, with the coheadquarters libraries supplying 89.1 percent of the System's loans. Downers Grove, which is a participant in the System union catalog, supplied 3.6 percent of the total of filled requests. Other System libraries supplied only 0.6 percent of the total of filled requests.

The Chicago Public Library and the Illinois State Library each supplied around 11 percent of the total loans with the University of Illinois and Southern Illinois University following. Other sources supplied only 0.4 percent of the total loans.

Periodically, the interlibrary loan center circulates a list of book requests that have not been filled among member libraries. The lists include juvenile and adult fiction titles. From one list of 59 titles, member libraries were able to fill

Table 6-6

INTERLIBRARY LOAN SERVICE
SUBURBAN LIBRARY SYSTEM
January-April, 1969

	January		February		March		April		Total	
	Requests	%	Requests	%	Requests	%	Requests	%	Requests	%
Requests[1]	1,393		1,800		1,743		1,499		6,435	
Requests Filled[2]	894	64.2	961	53.4	1,485	85.2	1,428	95.3	4,768	74.1
Cancelled, Not Available	158	11.3	123	6.8	222	12.7	326	21.7	829	12.9
Loan Source: System[3]										
Oak Park[4]	329	36.8	428	44.5	501	33.7	482	33.8	1,740	36.5
Park Forest[5]	215	24.1	200	20.8	283	19.1	319	22.3	1,017	21.3
Downers Grove[6]	24	2.7	40	4.2	53	3.6	56	3.9	173	3.6
System Office	19	2.1	22	2.3	50	3.4	45	3.2	136	2.9
Other System Libraries	3	0.3	-	-	-	-	25	1.8	28	0.6
Total From System's Resources	590	66.0	690	71.8	887	59.8	927	65.0	3,094	64.9
Loan Source: R & R Centers[7]										
Chicago Public Library	92	10.3	82	8.5	204	13.7	142	9.9	520	10.9
Illinois State Library	89	10.0	95	9.9	198	13.3	143	10.0	525	11.0
University of Illinois	73	8.2	56	5.8	135	9.1	118	8.3	382	8.0
Southern Illinois University	48	5.4	33	3.4	56	3.8	90	6.3	227	4.8
Total From R & R Centers	302	33.9	266	27.6	593	39.9	493	34.5	1,654	34.7
Loan Source: Other[3]	2	0.2	5	0.5	5	0.3	8	0.6	20	0.4

Notes:

[1] Includes requests carried over from previous month.

[2] Difference between requests and requests filled includes cancelled plus unfilled requests in process.

[3] Requests filled by loan source divided by total number of filled requests.

[4] Coheadquarters library: library's main catalog available to Interlibrary Loan staff, but cards are not interfiled in System's union catalog.

[5] Coheadquarters library: copies of catalog cards are interfiled in System's union catalog.

[6] Copies of cards of adult nonfiction are interfiled in System's union catalog.

[7] Research and Reference Centers.

32 requests. From a second list, 22 requests were filled out of 49. Thus, half of the books circulated on the lists were located in member libraries.

The Suburban Library System started a union catalog in February, 1968 in connection with its interlibrary loan service that was begun at the same time. Copies were made of the Park Forest shelf list and sent to the interlibrary loan service which was housed at the Oak Park Library. Copies were also made of catalog cards of adult nonfiction in the Downers Grove Library. In addition, catalog cards of the Suburban System book collection were interfiled with those of the other two libraries. Approximately 71,000 cards are now in the catalog.

The catalog consists of main entry cards only. No standards have been established for classification or cataloging and when cards of duplicate titles appear the loan librarian selects a single card.

Park Forest, Downers Grove, and the Suburban System submit new cards, substitution cards, or notices of withdrawals to the Interlibrary Loan Service monthly.

The catalog of the Oak Park Library, housed on the floor above the interlibrary loan service, is used in searching for a book, although its contents are not physically interfiled with the union catalog.

7. TITLE DUPLICATION SURVEY

7.1 Introduction

The title duplication survey has six objectives:

1. Determine the degree of overlap among libraries in a system;
2. Determine the probability of finding a randomly selected book in another library;
3. Determine the probability of finding a book in the system requested by a patron when the requestor's library does not have the book;
4. Determine how many duplicate copies of books would be purchased by each system;
5. Determine the degree of overlap among the headquarters libraries of the systems;
6. Determine the degree of overlap among the headquarters libraries and the four Research and Reference Centers.

All of the above information has been used in assessing the feasibility of developing intrasystem and intersystem union catalogs. The survey has also been used in considering centralized processing.

The present study is similar to an overlap study carried out at Colorado University as part of a larger investigation involving the feasibility of centralized processing for the nine libraries of the state-supported 4-year colleges and universities in Colorado.[1] It also drew on ideas presented in a study of collection overlap at the libraries of six New England State Universities.[2]

7.2 Sample Design

A sample of 700 titles was drawn at random from the 1963-1967 issues of American Book Publishing Record (BPR) by using a table of random digits to choose page numbers and positions on the pages.[3] The sample was stratified to represent approximately 65 percent adult nonfiction and 35 percent adult fiction, a proportion that was felt to be representative of the majority of the library collections.[4]

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[1] Lawrence E. Leonard, Joan M. Maier, and Richard M. Dougherty. "Colorado Academic Libraries Book Processing Center Study," University of Colorado, Boulder Colorado, June 1968. pp. 388. (PB 178 421)

[2] William R. Nugent. "Statistics of Collection Overlap at the Libraries of the Six New England State Universities," Library Resources and Technical Services, 12, Winter 1965, 31-36.

[3] The mathematical basis for the sample size is explained in Appendix D.

[4] Table 8-2 of Section 8 lists the total number of adult fiction and nonfiction books held by 134 reporting libraries. The actual proportion is 70 percent nonfiction and 30 percent fiction of the total of adult books. The small difference between the assumed and actual proportion does not influence the survey results and is within the error range of the design.

After the sample had been selected, the selected pages from BPR were copied, the titles were cut out and pasted on cards, an alphabetical list was made up of the titles, and the lists were sent to the sample libraries, in each Library System for checking.

In the larger Systems (more than 25 libraries), 11 libraries were selected at random in addition to the headquarters library. Seven libraries were selected at random from smaller Systems in addition to the headquarters library. A separate study was made of title overlap between headquarters libraries. The overlap between the four state Research and Reference Centers was also studied. The four centers are the Chicago Public Library, Illinois State Library, University of Illinois (Urbana), and Southern Illinois University. Finally, the overlap between the headquarters libraries and the R and R centers was determined.

7.3 Survey Analysis

A summary of the title duplication data is presented in Table 7-1 which covers six Library Systems, seven headquarters libraries,[5] and the four Research and Reference Centers.

The total number of titles held by survey libraries within a System ranged from 166 to 425 out of a sample of 700 titles. The number of survey titles held in common by at least two

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[5] Park Forest and Oak Park are coheadquarters libraries of the Suburban Library System.

Table 7-1

TITLE DUPLICATION SUMMARY

Library System	Libraries in System	Titles[1]			
		On Survey List		Number Duplicated	Only One Copy
		No.	%		
Bur Oak	18	206	29	101	105
DuPage	21	292	42	197	95
North Suburban	28	425	60	331	94
Northern Illinois	52	217	31	128	89
Starved Rock	20	166	24	58	108
Suburban	51	324	46	240	84
Headquarters Libraries[2]	7	412	59	302	110
Research & Reference Centers[3]	4	571	82	431	140

Notes:

[1] Survey sample size - 700 titles.

[2] Oak Park and Park Forest are coheadquarters libraries in the Suburban Library System.

[3] Chicago Public Library, Illinois State Library, University of Illinois (Urbana), Southern Illinois University.

libraries of a System ranged from 58 to 331. Survey titles held by only one library in a System ranged from 84 to 108.

The seven headquarters libraries held 412 of the 700 survey titles, of which 302 were held by two or more libraries and 110 of which were held by only one library of the seven. The four R and R Centers held 571 of the survey titles, 431 of which were held by two or more libraries and 140 by only one library.

The number of titles held by the sample libraries are shown in Tables 7-3C to 7-9C where the percentage value is the number of survey titles held by the designated library divided by 700.

As might be expected, the libraries with the largest collections tended to have the bulk of nonoverlap titles. Of the 94 survey titles held by only one library in the North Suburban Library System, for example, 77 titles were held by the four largest libraries in the survey sample. One of these libraries held 50 titles, more than half of the total number of singly held titles. The remaining 17 nonduplicated titles were scattered among the other eight libraries of the System.

This pattern was repeated in the Bur Oak Library System where the Joliet Public Library, headquarters library of the System , held 51 percent of the 105 survey titles found in only one library. Lockport and Kankakee, two other large system libraries, held 21 and 22 of the 105 titles that were not duplicated.

A similar pattern is found in the other Library Systems. The headquarters library holds the majority of books which are held by only one library in the System. Two or three of the larger libraries each hold a smaller percentage of survey titles appearing in only one library, while the remaining titles are scattered among the smaller libraries.

Surprisingly, the same pattern appears among the headquarters libraries where it might have been assumed that survey titles appearing only once among the libraries would be more equally distributed. A tally of the 110 titles found in only one library of the 412 titles held by the seven libraries shows that the Rockford Public Library held 60, or 55 percent. Evanston held 13 titles, Joliet and Oak Park held 10 each, Wheaton held 8, Ottawa 5, and Park Forest 4.

A more even distribution of the 140 survey titles held by only one library was found among the R and R Centers where Southern Illinois University held 50 titles, University of Illinois (Urbana) held 38, Chicago Public Library held 32, and the Illinois State Library held 20.

After the titles held by each library were tabulated, the number of titles held in common by each pair of the libraries was recorded. This information was entered into a title overlap matrix, an example of which is shown for the headquarters libraries and R and R Centers in Figure 7-1.

	Evanston	Joliet	Oak Park	Ottawa	Park Forest	Rockford	Wheaton		Chicago Public Library	Illinois State Library	Southern Illinois University	University of Illinois (Urbana)
Evanston (North Suburban)	221	78	100	77	114	168	142		152	127	129	140
Joliet (Bur Oak)	78	133	60	54	67	98	89		74	74	73	62
Oak Park (Suburban)	100	60	142	55	82	107	108		105	89	99	83
Ottawa (Starved Rock)	77	54	55	115	69	88	82		73	70	55	60
Park Forest (Suburban)	114	67	82	69	163	131	118		106	88	100	88
Rockford (Northern Illinois)	168	98	107	88	131	303	160		186	159	170	155
Wheaton (DuPage)	142	89	108	82	118	160	214		137	128	140	103
Chicago Public Library	152	74	105	73	106	186	137		318	175	195	207
Illinois State Library	127	74	89	70	88	159	128		175	249	161	151
Southern Illinois University	129	73	99	55	100	170	140		195	161	378	266
University of Illinois (Urbana)	140	62	83	60	88	155	103		207	151	266	363

Figure 7-1. Title Overlap Matrix - Headquarters Libraries and R & R Centers

The horizontal and vertical headings, the names of libraries in the sample, are the same. The numbers along the main diagonal, the underlined figures in the cells of row 1-column 1, row 2-column 2, etc., are the number of titles on the sampling list held by each library. The numbers in each row show the actual number of duplications of titles in each of the libraries with respect to the library that appears on the column of the matrix. The number of titles duplicated between any two libraries can be found by locating a library's name on a row and finding the point of intersection of this row with the column corresponding to the second library. This process can be reversed and the column number of the first library followed to the intersection of the row corresponding to the second.

The title overlap matrix of Figure 7-1 will be used for discussion. To determine the overlap between the Evanston and Park Forest libraries, for example, find the row corresponding to Evanston (row 1) on the left side of the matrix and follow this row to its intersection with the column corresponding to Park Forest (column 5). The number in the intersecting cell is 114, the number of titles Park Forest has in common with Evanston.

From the main diagonal, it can be seen that Evanston had 221 titles and Park Forest had 163 titles from the list of 700.

The probability (or proportion) of overlap between any two libraries can be calculated by finding the number of titles held in common from the overlap matrix and dividing this number by the total number of titles from the list held by the first library. For example, to obtain the overlap probabilities with the Evanston library, 221 is used as the divisor for each of the other values in row 1 of the title overlap matrix. For a title picked at random from the Evanston library, for example, the probability of its also being found in Park Forest is the number 114 that was found above divided by 221, or 0.51.[6]

The overlap probabilities have been calculated for all pairs of libraries of Figure 7-1 and are shown in the overlap probability matrix of Figure 7-2.

The question answered by the overlap probability matrix is: given that a book is in library X, what is the probability that it is also in library Y, Z, etc. To obtain the probability that a book selected at random in a given library is also in another library in a System find the row corresponding to the given library and then find the point of intersection of this row with the column corresponding to the other library.

The intersecting cell of Evanston (row 1) and Park Forest (column 5) of Figure 7-2 contains 0.51 which is the overlap probability between Evanston and Park Forest as found above. For a title picked at random from the Park Forest library, the probability that it will also be found in Evanston is 0.70 (row 5, column 1 of Figure 7-2).

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[6] Probabilities are expressed as decimal numbers ranging from 0, no probability, to 1, certainty. They can also be expressed as percentages. In the example above, there is a 51 percent probability that a book selected at random in the Evanston library will also be found in the Park Forest library.

	Evanston	Joliet	Oak Park	Ottawa	Park Forest	Rockford	Wheaton		Chicago Public Library	Illinois State Library	Southern Illinois University	University of Illinois (Urbana)
Evanston		.35	.45	.35	.51	.76	.64		.69	.57	.58	.63
Joliet	.59		.45	.41	.50	.74	.67		.56	.56	.55	.47
Oak Park	.70	.42		.39	.58	.75	.76		.74	.63	.70	.58
Ottawa	.67	.47	.48		.60	.76	.71		.63	.61	.48	.52
Park Forest	.70	.41	.50	.42		.80	.72		.65	.54	.61	.54
Rockford	.55	.32	.35	.29	.43		.53		.61	.52	.56	.51
Wheaton	.66	.41	.50	.38	.55	.75			.64	.60	.65	.48
Chicago Public Library	.48	.23	.33	.23	.33	.58	.43			.55	.61	.65
Illinois State Library	.51	.30	.36	.28	.35	.64	.51		.70		.65	.61
Southern Illinois University	.34	.19	.26	.14	.26	.45	.37		.51	.42		.70
University of Illinois (Urbana)	.38	.17	.23	.16	.24	.43	.28		.57	.41	.73	

Figure 7-2. Overlap Probability Matrix - Headquarters Libraries and R and R Centers

The probability that a library will have a title selected at random from any of the other libraries in the sample is the sum of the values in that library's column divided by the number of libraries in the sample less 1. The probability that Evanston will have a title selected at random from any of the headquarters libraries, for example, is 0.65 (the sum of column 1, excluding R and R Centers, of the matrix of Figure 7-2 divided by six).

These values are shown in Table 7-9A for the headquarters libraries and in Tables 7-3A to 7-8A for the other libraries in the study.

The average probability of duplication in a Library System or group of libraries is obtained from the overlap probability matrix of each System by finding the average probability of each column, summing over all columns, and taking the average of the sum. The average probability of duplication is the probability that a title selected at random in a library of a System will also be found in another library in the System.

The sum of the values in the row for each library yields the number of expected duplicate titles to be found in the libraries studied. Thus a book selected at random from the Evanston library can be expected to be duplicated 3.06 times, on the average, in the other six headquarters libraries (the sum of row 1, excluding R and R Centers, of the matrix of Figure 7-2).

These values are shown in Tables 7-3B to 7-9B for the libraries in the study.

The average number of duplications plus 1 yields the expected number of sharable uses of cataloging information. This is the number of copies of a book that would be available for a centralized processing facility, given that a sample library purchases the book.

The average number of duplications in a Library System is obtained from the overlap probability matrix by summing the row values, taking their average, and multiplying the average by a factor based on the sample size and the System size, where

$$\text{factor} = \frac{\text{number of libraries in System}}{\text{sample size}} .$$

Summing the expected number of sharable uses of cataloging information of the six Library Systems yields the average number of copies of a book that would be available for centralized purchasing, given that a library purchases the book.

The average probability of duplication, the average number of duplications, and the average number of sharable uses of cataloging information for the six Library Systems, the headquarters libraries, and the R and R Centers are summarized in Table 7-2.

As can be seen from Table 7-2, the average probability of duplication does not vary greatly in the six Library Systems. These overlap probabilities indicate a fairly high degree of homogeneity in the collections of each System. As might be expected, the amount of overlap is, in general, a function of collection size so that the probability of a book that is

Table 7-2

AVERAGE PROBABILITY AND NUMBER OF DUPLICATIONS
IN LIBRARY SYSTEMS

Library System	Average Probability of Duplication	Average Number of Duplications	Average Number Sharable Uses Cataloging Information
Bur Oak	0.37	5.83	6.83
DuPage	0.37	6.67	7.67
North Suburban	0.48	12.27	13.27
Northern Illinois	0.38	19.93	20.93
Starved Rock	0.38	6.67	7.67
Suburban	0.43	19.89	20.89
Total	0.40[1]	71.26	77.26
Headquarters Libraries	0.54	3.27	4.27
Research and Reference Centers	0.59	1.78	2.78

Note: [1] Average of six Systems

selected from a small library being in the collection of the large libraries in a System is higher as a rule than the converse case, i.e., a book selected from a large library is less likely to be in a smaller library.

The average probability of duplication among the seven headquarters libraries is 0.54, a figure slightly higher than that of any Library System, or than the 0.40 average value of the six Systems. The higher probability may be due to the headquarters libraries having larger collections than the remaining libraries in the systems. If only the larger libraries in each system had been considered, their overlap probability would be correspondingly higher.

The average probability of duplication among the four R and R Centers is 0.59, the highest value obtained in the study.

The average number of duplications ranged from 5.83 to 19.93 among the six Library Systems. The average number is 3.27 among the seven headquarters libraries, and is 1.78 among the four R and R Centers.

Given that a library purchases a book, the expected number of duplications among all 190 libraries of the six Library Systems is 77.26.

A second measure of overlap among the libraries is the conditional probability of finding a title in a particular library if the title is not in another library. This quantity can be found from the overlap data by subtracting the number of titles held in common by two libraries from the number of titles on the sample list held by the first library of the pair. This gives the number of titles not held in common by two libraries. This number divided by the number of titles on the sample list not held by the second library gives the probability of nonoverlap.[7]

Taking Evanston and Park Forest as examples again, we find from the title overlap matrix (Figure 7-1) that Evanston and Park Forest had 114 titles in common (row 5 column 1). Park Forest held 163 of the 700 titles (main diagonal) leaving 537 not held. The number of titles held by Evanston is 221 (main diagonal). The number of titles held by Evanston but not by Park Forest is 221 minus 114 or 107. Therefore, the probability of a book being in the Evanston library given that it is not in the Park Forest Library is

$$P = \frac{221-114}{700-163} = \frac{107}{537} = 0.20.$$

---

[7] The conditional probability of a title being in library x given that it is not found in library y is

$$P(L_x | \bar{L}_y) = \frac{f(L_x \cap \bar{L}_y)}{f(\bar{L}_y)},$$

which is read as: the probability of L_x given not L_y is equal to the number of occurrences of a book in L_x not overlapping with a book in L_y divided by the number of books on the survey list not found in L_y. The bar over the L denotes that the event signified by L is negated, i.e., L = books, $\bar{L}$ = no books. The symbol $\cap$ denotes logical intersection. The symbol $|$ denotes a given or assumed event.

The converse case, the probability of finding a book in the Park Forest library given that it is not in the Evanston library is

$$P = \frac{163-114}{700-221} = \frac{49}{479} = 0.10.$$

These figures can be obtained for all libraries in a System and provide a good measure of the utility of a union catalog for interlibrary loan service. System and headquarters nonoverlap matrices appear in Figures 7-3C to 7-9C.

7.4 Title Duplication Among Libraries

7.4.1 Bur Oak Library System

The Bur Oak Library System has an average probability of duplication of 0.37 with a median value of 0.34 (Table 7-3A). The three largest libraries in the system, Joliet, Kankakee and Lockport show the highest average degree of overlap, 0.60, 0.53, and 0.53, respectively, as can be seen from Table 7-3A. The system has an average of 5.83 duplications as Table 7-3B shows. This in turn leads to a figure of 6.83 sharable uses of cataloging information. The significance of these figures for centralized processing is obvious. The same book is, on the average, being ordered and processed 6.83 times in the Bur Oak Library System.

Based on the sample survey, calculations were made for each library of the probability of a title published in the years 1963-1967 being in one of the system libraries. As can be seen

Table 7-3A

PROBABILITY OF A TITLE IN ANOTHER LIBRARY BEING DUPLICATED IN THE LISTED LIBRARIES BUR OAK LIBRARY SYSTEM

1.	Bradley	0.27
2.	Joliet	0.60
3.	Momence	0.26
4.	Lockport	0.53
5.	Kankakee	0.53
6.	New Lenox	0.11
7.	Plainfield	0.25
8.	Plano	0.41

Average Probability = 0.37

Table 7-3B

EXPECTED NUMBER OF DUPLICATIONS IN OTHER LIBRARIES OF A TITLE IN THE LISTED LIBRARIES BUR OAK LIBRARY SYSTEM

1.	Bradley	3.61
2.	Joliet	1.13
3.	Momence	3.47
4.	Lockport	1.64
5.	Kankakee	1.64
6.	New Lenox	3.09
7.	Plainfield	3.51
8.	Plano	2.65

Sample Average = 2.59

System Average = 5.83

Sharable Uses of Cataloging Information = 6.83

from Table 7-3C, the chances of finding a given title for these years in the Bur Oak System are small, being on the average only 0.07.

Figure 7-3C, the probability of nonoverlapping titles among four large libraries, is used in the following manner. Find the library in which a book is sought on the row of the matrix; find the library where the title is not held on the column; read the number at the intersection of the row and column for the two libraries of interest. For example, if one wished to know the probability of finding a given book in the Joliet Library if the book is known not to be in the Kankakee Library, then one would find Joliet at row 1 and Kankakee at column 2. The intersection of row 1 and column gives 0.14 (14 percent) as the probability of finding a title in the Joliet Library given that it is not in the Kankakee Library. The converse probability (row 2, column 1) is 0.07.

Examination of the probability of nonoverlap among the largest libraries of the system (Figure 7-3C) indicates the little benefit that is attainable from a union catalog for the System. For example, if a patron requested a book at the Kankakee Library that was not in the Kankakee collection, the chances of its being in the Joliet, Lockport, or Plano libraries are only 14, 8, and 2 percent, respectively.

Table 7-3C

PROBABILITY OF A TITLE PUBLISHED
FROM 1963 - 1967
BEING IN A LISTED LIBRARY

1.	Bradley	0.03
2.	Joliet	0.19
3.	Momence	0.03
4.	Lockport	0.12
5.	Kankakee	0.12
6.	New Lenox	0.01
7.	Plainfield	0.02
8.	Plano	0.05

Average Probability = 0.07

	Bradley	Joliet	Momence	Lockport	Kankakee	New Lenox	Plainfield	Plano
Bradley	19	12	9	14	11	3	7	12
Joliet	12	133	15	46	44	5	12	18
Momence	9	15	19	12	11	3	7	9
Lockport	14	46	12	87	35	3	12	21
Kankakee	11	44	11	35	84	6	11	20
New Lenox	3	5	3	3	6	9	3	5
Plainfield	7	12	7	12	11	3	18	11
Plano	12	18	9	21	20	5	11	36

Figure 7-3A. Title Overlap Matrix - Bur Oak Library System

	Bradley	Joliet	Momence	Lockport	Kankakee	New Lenox	Plainfield	Plano
Bradley		.63	.47	.77	.58	.16	.37	.63
Joliet	.09		.11	.34	.33	.04	.09	.13
Momence	.47	.79		.63	.58	.16	.37	.47
Lockport	.16	.53	.14		.40	.03	.14	.24
Kankakee	.13	.06	.03	.03		.07	.13	.24
New Lenox	.33	.52	.13	.42	.67		.33	.55
Plainfield	.39	.67	.39	.67	.61	.17		.61
Plano	.33	.50	.25	.58	.55	.14	.30	

Figure 7-3B. Overlap Probability Matrix - Bur Oak Library System

	Joliet	Kankakee	Lockport	Plano
Joliet	567	89	87	115
Kankakee	40	616	49	64
Lockport	31	52	613	66
Plano	18	16	15	664

Joliet	0	.14	.14	.17
Kankakee	.07	0	.08	.10
Lockport	.05	.08	0	.10
Plano	.03	.02	.02	0

Figure 7-3C. Probability of Nonoverlapping Titles Among Four Large Libraries - Bur Oak Library System.

7.4.2 DuPage Library System

The average probability of overlap in the DuPage Library System is 0.37 (Table 7-4A), with a median value of 0.42. Wheaton, Lombard, and Geneva had the highest average degrees of overlap: 0.72, 0.55, and 0.48, respectively.

As can be seen from Table 7-4B, the System average of title duplications is 6.67 with the number of sharable uses of cataloging information 7.67. Therefore, on the average, when a library in the DuPage Library System purchases a book, 6.67 other libraries in the system can be expected to also purchase it.

As Table 7-4C shows, the average probabilitity of any book published in the period 1963-1967 being found in the system is 0.12.

The probability of nonoverlap was calculated for the Wheaton, Franklin Park, Geneva, and Lombard Libraries and is shown in Figure 7-4C. The data indicate that even though the three libraries other than the headquarters library are nearly the same size, the chances of finding a book in their collections that is not already in the Wheaton collection are small. For instance, the probabilities of finding a book in the collections of the other three libraries given that the book is not in the Wheaton collection are 5, 6, and 4 percent, respectively. There is about a 21 percent chance of finding a book in the Wheaton collection when it cannot be found in one of the other three libraries.

Table 7-4A

PROBABILITY OF A TITLE IN ANOTHER LIBRARY BEING DUPLICATED IN THE LISTED LIBRARIES DUPAGE LIBRARY SYSTEM

1.	Addison	0.42
2.	Franklin Park	0.42
3.	Geneva	0.48
4.	Itasca	0.14
5.	Lombard	0.55
6.	North Aurora	0.07
7.	Wheaton	0.72
8.	Wood Dale	0.19

Average Probability = 0.37

Table 7-4B

EXPECTED NUMBER OF DUPLICATIONS IN OTHER LIBRARIES OF A TITLE IN THE LISTED LIBRARIES DUPAGE LIBRARY SYSTEM

1.	Addison	2.22
2.	Franklin Park	2.22
3.	Geneva	2.16
4.	Itasca	2.51
5.	Lombard	3.36
6.	North Aurora	2.51
7.	Wheaton	1.69
8.	Wood Dale	3.69

Sample Average = 2.54

System Average = 6.67

Sharable Uses of Cataloging Information = 7.67

Table 7-4C

PROBABILITY OF A TITLE PUBLISHED
FROM 1963 - 1967
BEING IN A LISTED LIBRARY
DUPAGE LIBRARY SYSTEM

Average Probability = 0.12

1.	Addison	0.13
2.	Franklin Park	0.15
3.	Geneva	0.17
4.	Itasca	0.03
5.	Lombard	0.15
6.	North Aurora	0.01
7.	Wheaton	0.30
8.	Wood Dale	0.03

	Addison	Franklin Park	Geneva	Itasca	Lombard	North Aurora	Wheaton	Wood Dale
Addison	94	35	44	6	40	6	69	10
Franklin Park	35	106	47	10	50	3	83	9
Geneva	44	47	122	10	58	3	92	12
Itasca	6	10	10	19	13	2	14	7
Lombard	40	50	58	13	108	5	89	16
North Aurora	6	3	3	2	5	8	4	4
Wheaton	69	83	92	14	89	4	214	14
Wood Dale	10	9	12	7	16	4	14	20

Figure 7-4A. Title Overlap Matrix - DuPage Library System

	Addison	Franklin Park	Geneva	Itasca	Lombard	North Aurora	Wheaton	Wood Dale
Addison		.37	.47	.06	.42	.06	.73	.11
Franklin Park	.33		.44	.09	.47	.03	.78	.08
Geneva	.36	.38		.08	.47	.02	.75	.10
Itasca	.31	.53	.53		.68	.10	.74	.37
Lombard	.37	.46	.54	.12		.05	.82	.15
North Aurora	.75	.37	.37	.25	.62		.50	.50
Wheaton	.32	.39	.43	.06	.41	.02		.06
Wood Dale	.50	.45	.60	.35	.80	.20	.70	

Figure 7-4B. Overlap Probability Matrix - DuPage Library System

	Wheaton	Franklin Park	Geneva	Lombard
Wheaton	486	131	122	125
Franklin Park	23	594	59	56
Geneva	30	75	578	64
Lombard	19	58	50	592

Wheaton	0	.22	.21	.21
Franklin Park	.05	0	.10	.09
Geneva	.06	.13	0	.11
Lombard	.04	.10	.09	0

Figure 7-4C. Probability of Nonoverlapping Titles Among Four Large Libraries - DuPage Library System.

7.4.3 North Suburban Library System

The North Suburban Library System (Table 7-5A) had the highest average degree of overlap, (0.48, with a median of 0.44), of the six Systems studied. Skokie, Wilmette, and Evanston showed the greatest average overlap probabilities: 0.80, 0.68, and 0.66, respectively. Skokie had the highest average overlap of any library studied in the six Systems.

For the North Suburban Library System, the average number of duplications is 12.27 with 13.27 sharable uses of cataloging information (Table 7-5B). Roughly half of the libraries in the System are purchasing duplicates of titles purchased by other System members. Here again there are advantages to be gained from centralization of this process.

The average probability of finding a title published during the years 1963-1967 in a library of the North Suburban System was 0.20 (Table 7-5C).

Nonoverlap probability was calculated for Evanston, Skokie, Waukegan, and Wilmette. With the exception of Wilmette these libraries have collections numbering more than 100,000 volumes. As Figure 7-5C indicates, the Skokie Library has the greatest possibility of filling a request from one of the other three libraries. The average chance of finding a book in the Skokie collection that is not in the other libraries is 32 percent. On the other hand, if a book is not in the Skokie collection, the chances of finding it in either Evanston, Waukegan, or Wilmette are only 13, 7, and 11 percent, respectively.

Table 7-5A

PROBABILITY OF A TITLE IN ANOTHER LIBRARY BEING DUPLICATED IN THE LISTED LIBRARIES NORTH SUBURBAN LIBRARY SYSTEM

1.	Barrington	0.40
2.	Evanston	0.66
3.	Fremont	0.20
4.	Glencoe	0.49
5.	Libertyville	0.35
6.	Mount Prospect	0.46
7.	Schaumberg	0.40
8.	Skokie	0.80
9.	Waukegan	0.55
10.	Deerfield	0.42
11.	Wheeling	0.31
12.	Wilmette	0.68

Average Probability = 0.48

Table 7-5B

EXPECTED NUMBER OF DUPLICATIONS IN OTHER LIBRARIES OF A TITLE IN THE LISTED LIBRARIES NORTH SUBURBAN LIBRARY SYSTEM

1.	Barrington	5.72
2.	Evanston	4.20
3.	Fremont	6.53
4.	Glencoe	5.47
5.	Libertyville	6.41
6.	Mount Prospect	5.19
7.	Schaumberg	5.05
8.	Skokie	3.40
9.	Waukegan	4.43
10.	Deerfield	5.58
11.	Wheeling	6.24
12.	Wilmette	4.87

Sample Average = 5.26

System Average = 12.27

Sharable Uses of Cataloging Information = 13.27

Table 7-5C

PROBABILITY OF A TITLE PUBLISHED FROM 1963 - 1967 BEING IN A LISTED LIBRARY NORTH SUBURBAN LIBRARY SYSTEM

1.	Barrington	0.14
2.	Evanston	0.31
3.	Fremont	0.06
4.	Glencoe	0.18
5.	Libertyville	0.11
6.	Mount Prospect	0.17
7.	Schaumberg	0.16
8.	Skokie	0.45
9.	Waukegan	0.26
10.	Deerfield	0.15
11.	Wheeling	0.10
12.	Wilmette	0.28

Average Probability = 0.20

	Barrington	Evanston	Fremont	Glencoe	Libertyville	Mt. Prospect	Schaumburg	Skokie	Waukegan	Deerfield	Wheeling	Wilmette
Barrington	101	65	24	50	39	56	44	87	55	55	30	73
Evanston	65	221	30	94	53	79	80	170	117	66	48	126
Fremont	24	30	43	26	27	26	21	33	24	22	19	29
Glencoe	50	94	26	129	46	57	54	104	75	53	42	105
Libertyville	39	53	27	46	78	48	36	70	51	34	28	62
Mt. Prospect	56	79	26	57	48	123	40	91	62	61	41	81
Schaumburg	44	80	21	54	36	40	116	97	63	40	33	80
Skokie	87	170	33	104	70	91	97	319	155	81	56	151
Waukegan	55	117	24	75	51	62	63	155	182	58	45	102
Deerfield	55	66	22	53	34	61	40	81	58	106	43	80
Wheeling	30	48	19	42	28	41	33	56	45	43	71	57
Wilmette	73	126	29	105	62	81	80	151	102	80	57	194

Figure 7-5A. Title Overlap Matrix - North Suburban Library System

	Barrington	Evanston	Fremont	Glencoe	Libertyville	Mt. Prospect	Schaumburg	Skokie	Waukegan	Deerfield	Wheeling	Wilmette
Barrington		.65	.24	.49	.39	.55	.44	.86	.54	.54	.30	.72
Evanston	.29		.14	.42	.24	.36	.36	.77	.53	.30	.22	.57
Fremont	.56	.70		.60	.63	.60	.49	.77	.56	.51	.44	.67
Glencoe	.39	.73	.20		.36	.44	.42	.81	.58	.41	.32	.81
Libertyville	.50	.68	.35	.59		.61	.46	.90	.65	.43	.45	.79
Mt. Prospect	.45	.64	.21	.46	.39		.32	.74	.50	.49	.33	.66
Schaumburg	.38	.69	.18	.46	.31	.34		.84	.54	.34	.28	.69
Skokie	.27	.53	.10	.33	.22	.28	.30		.48	.25	.17	.47
Waukegan	.30	.64	.13	.41	.28	.34	.35	.85		.32	.25	.56
Deerfield	.52	.62	.21	.50	.32	.57	.38	.76	.55		.40	.75
Wheeling	.42	.68	.27	.59	.39	.58	.46	.79	.63	.60		.80
Wilmette	.38	.65	.15	.54	.32	.42	.41	.78	.52	.41	.29	

Figure 7-5B. Overlap Probability Matrix - North Suburban Library System

	Evanston	Skokie	Waukegan	Wilmette
Evanston	479	51	104	95
Skokie	149	381	164	168
Waukegan	65	27	518	80
Wilmette	68	43	92	506

Evanston	0	.13	.20	.19
Skokie	.31	0	.32	.33
Waukegan	.13	.07	0	.16
Wilmette	.14	.11	.18	0

Figure 7-5C. Probability of Nonoverlapping Titles Among Four Large Libraries - North Suburban Library System.

7.4.4 Northern Illinois Library System

As can be seen from Table 7-6A, the Northern Illinois System had an average probability of overlap of 0.38 with a median value of 0.34. Rockford, Crystal Lake and DeKalb had the greatest average overlap probabilities: 0.79, 0.62, and 0.57, respectively. Rockford had the second highest overlap of any library studied, its 0.79 being second only to Skokie's 0.80.

The average number of title duplications throughout the system was 19.93. The sharable uses of cataloging information were 20.93 (Table 7-6B). On the average, a centralized processing facility would process 20.93 duplicate titles for this system.

As Table 7-6C shows, the average probability of finding a given title published in the period 1963-1967 in the system was 0.11. The probability of nonoverlap was obtained for the headquarters library plus the three largest libraries in the sample for the Northern Illinois Library System. The libraries studied were: Rockford, Freeport, DeKalb and Loves Park.

Figure 7-6C gives evidence of the small chance of locating a given title in libraries that are much smaller than the library at which a book was originally sought. Taking the column headed "Rockford" as an example and reading down the column one obtains the following: If the given title is not in the Rockford collection (227,000 volumes in 1968), then the chances are only 11, 6, and 1 percent that it will be found in

Table 7-6A

PROBABILITY OF A TITLE IN ANOTHER LIBRARY BEING DUPLICATED IN THE LISTED LIBRARIES NORTHERN ILLINOIS LIBRARY SYSTEM

1.	Antioch	0.37
2.	Crystal Lake	0.62
3.	DeKalb	0.57
4.	Freeport	0.51
5.	Galena	0.31
6.	Lena	0.23
7.	Loves Park	0.17
8.	McHenry	0.18
9.	Rockford	0.79
10.	South Beloit	0.41
11.	Wauconda	0.16
12.	Woodstock	0.31

Average Probability = 0.38

Table 7-6B

EXPECTED NUMBER OF DUPLICATIONS IN OTHER LIBRARIES OF A TITLE IN THE LISTED LIBRARIES NORTHERN ILLINOIS LIBRARY SYSTEM

1.	Antioch	4.29
2.	Crystal Lake	3.43
3.	DeKalb	3.48
4.	Freeport	2.41
5.	Galena	5.08
6.	Lena	5.89
7.	Loves Park	4.56
8.	McHenry	4.16
9.	Rockford	1.71
10.	South Beloit	4.19
11.	Wauconda	7.37
12.	Woodstock	4.34

Sample Average = 4.60

System Average = 19.93

Sharable Uses of Cataloging Information = 20.93

Table 7-6C

PROBABILITY OF A TITLE PUBLISHED
FROM 1963 - 1967
BEING IN A LISTED LIBRARY
NORTHERN ILLINOIS LIBRARY SYSTEM

1.	Antioch	0.08
2.0	Crystal Lake	0.17
3.	DeKalb	0.16
4.	Freeport	0.22
5.	Galena	0.05
6.	Lena	0.03
7.	Loves Park	0.03
8.	McHenry	0.04
9.	Rockford	0.43
10.	South Beloit	0.09
11.	Wauconda	0.02
12.	Woodstock	0.06

Average Probability = 0.11

	Antioch	Crystal Lake	DeKalb	Freeport	Galena	Lena	Loves Park	McHenry	Rockord	South Beloit	Wauconda	Woodstock
Antioch	58	39	36	33	19	12	8	8	44	25	9	16
Crystal Lake	39	122	67	62	24	17	17	19	99	39	11	25
DeKalb	36	67	110	45	24	14	15	16	86	42	11	26
Freeport	33	62	45	153	19	11	15	13	107	34	11	23
Galena	19	24	24	19	36	11	7	13	25	19	9	13
Lena	12	17	14	11	11	22	8	6	19	13	8	11
Loves Park	8	17	15	15	7	8	25	2	20	8	4	10
McHenry	8	19	16	13	13	6	2	29	21	13	5	5
Rockford	44	99	86	107	25	19	20	21	303	49	12	40
South Beloit	25	39	42	34	19	13	8	13	49	64	9	18
Wauconda	9	11	11	11	9	8	4	5	12	9	13	9
Woodstock	16	25	26	23	13	11	10	5	40	18	9	45

Figure 7-6A. Title Overlap Matrix - Northern Illinois Library System

	Antioch	Crystal Lake	DeKalb	Freeport	Galena	Lena	Loves Park	McHenry	Rockford	South Beloit	Wauconda	Woodstock
Antioch		.67	.62	.57	.33	.21	.14	.14	.76	.43	.15	.27
Crystal Lake	.32		.55	.51	.20	.14	.14	.15	.81	.32	.09	.20
DeKalb	.33	.61		.41	.22	.13	.14	.14	.78	.38	.10	.24
Freeport	.21	.40	.29		.12	.07	.10	.08	.70	.22	.07	.15
Galena	.53	.67	.67	.53		.30	.19	.36	.69	.53	.25	.36
Lena	.54	.77	.64	.50	.50		.36	.27	.86	.59	.36	.50
Loves Park	.32	.68	.60	.60	.28	.32		.08	.80	.32	.16	.40
McHenry	.27	.65	.55	.45	.45	.21	.07		.72	.45	.17	.17
Rockford	.14	.33	.28	.35	.08	.06	.07	.07		.16	.04	.13
South Beloit	.39	.61	.66	.53	.30	.20	.12	.20	.76		.14	.28
Wauconda	.69	.85	.85	.69	.69	.61	.31	.38	.92	.69		.69
Woodstock	.35	.55	.58	.51	.29	.24	.22	.11	.89	.40	.20	

Figure 7-6B. Overlap Probability Matrix - Northern Illinois Library System

	Rockford	Freeport	DeKalb	Loves Park
Rockford	397	196	217	283
Freeport	46	547	108	138
Dekalb	24	65	590	95
Loves Park	5	10	10	675

Rockford	0	.36	.37	.42
Freeport	.11	0	.18	.20
DeKalb	.06	.12	0	.14
Loves Park	.01	.02	.02	0

Figure 7-6C. Probability of Nonoverlapping Titles Among Four Large Libraries - Northern Illinois Library System

the Freeport, DeKalb, or Loves Park Library, respectively. The same pattern holds true for the other three libraries: If a title is not in a larger library, the chances of finding it in a smaller library are generally poor.

7.4.5 Starved Rock Library System

Data for the six libraries completing the overlap survey list are presented in Tables 7-7A, 7-7B, and 7-7C and Figures 7-7A, 7-7B, and 7-7C.

The average probability of overlap is 0.38 with a median of 0.39 (Table 7-7A). Ottawa, Peru and Mendota showed the highest average overlap probabilities: 0.53, 0.52, and 0.46, respectively.

As is shown in Table 7-7B, the average number of title duplications in the System is 6.67 with a value of 7.67 for sharable uses of cataloging information. More than one-third of the System members are duplicating titles purchased by other members.

The average chance of finding a title published in the period 1963-1967 in the system was 0.06 (Table 7-7C).

The nonoverlap probability was determined for Ottawa, Peru, Princeton and Sandwich (Figure 7-7C). The average probability of finding a title in the Ottawa Library when it was not in the other three libraries was about 0.14. The other three libraries show a very small chance of holding a title not held by another library.

Table 7-7A

PROBABILITY OF A TITLE IN ANOTHER LIBRARY BEING DUPLICATED IN THE LISTED LIBRARIES STARVED ROCK LIBRARY SYSTEM

1.	Mendota	0.52
2.	Ottawa	0.53
3.	Peru	0.46
4.	Princeton	0.33
5.	Sandwich	0.28
6.	Wyant	0.14

Average Probability = 0.38

Table 7-7B

EXPECTED NUMBER OF DUPLICATIONS IN OTHER LIBRARIES OF A TITLE IN THE LISTED LIBRARIES STARVED ROCK LIBRARY SYSTEM

1.	Mendota	1.54
2.	Ottawa	0.70
3.	Peru	2.55
4.	Princeton	1.85
5.	Sandwich	2.00
6.	Wyant	3.36

Sample Average = 2.00

System Average = 6.67

Sharable Uses of Cataloging Information = 7.67

Table 7-7C

PROBABILITY OF A TITLE PUBLISHED FROM 1963 - 1967 STARVED ROCK LIBRARY SYSTEM

1.	Mendota	0.07
2.	Ottawa	0.16
3.	Peru	0.06
4.	Princeton	0.04
5.	Sandwich	0.03
6.	Wyant	0.01

Average Probability = 0.06

	Mendota	Ottawa	Peru	Princeton	Sandwich	Wyant		
Mendota	53	27	23	14	12	6		
Ottawa	27	115	26	14	9	5		
Peru	23	26	42	14	9	6		
Princeton	14	14	14	29	7	5		
Sandwich	12	9	9	7	21	5		
Wyant	6	5	6	5	5	8		

Figure 7-7A. Title Overlap Matrix - Starved Rock Library System

	Mendota	Ottawa	Peru	Princeton	Sandwich	Wyant		
Mendota		.51	.43	.26	.23	.11		
Ottawa	.23		.23	.12	.08	.04		
Peru	.55	.62		.33	.21	.14		
Princeton	.48	.48	.48		.24	.17		
Sandwich	.57	.43	.43	.33		.24		
Wyant	.75	.62	.75	.62	.62			

Figure 7-7B. Overlap Probability Matrix - Starved Rock Library System

	Ottawa	Peru	Princeton	Sandwich
Ottawa	585	89	101	106
Peru	16	658	28	33
Princeton	15	15	671	22
Sandwich	12	12	14	679

Ottawa	0	.13	.15	.16
Peru	.03	0	.04	.05
Princeton	.02	.02	0	.03
Sandwich	.02	.02	.02	0

Figure 7-7C. Probability of Nonoverlapping Titles Among Four Large Libraries - Starved Rock Library System.

7.4.6 Suburban Library System

For the Suburban Library System, the average probability of overlap was 0.43 with a median value of 0.41 (Table 7-8A). Park Forest, Downers Grove and Oak Park had the highest average probabilities: 0.63, 0.62, and 0.54, respectively.

For the Suburban Library System the average number of title duplications is 19.89. The average number of sharable uses of cataloging information is 20.89 (Table 7-8B).

The average probability, for the system, of finding a title published in 1963-1967 was 0.15 (Table 7-8C).

The probability of nonoverlap was calculated for Oak Park, Park Forest, Chicago Heights and Downers Grove (Figure 7-8C). All four of the libraries showed nearly equal probabilities of holding a given title that was not held by another library. The average probabilities for Oak Park, Park Forest, Chicago Heights, and Downers Grove were: 0.11, 0.14, 0.10, and 0.13, respectively.

7.4.7 Headquarters Libraries and R and R Centers

The title overlap and overlap probability matrices of the headquarters libraries have already been shown in Figures 7-1 and 7-2. The other tables summarizing overlap and duplication are Tables 7-9A and 7-9B. The probability of a survey title being in a headquarters library appears in the table for the corresponding System.

The average overlap probability of the seven headquarters libraries is 0.54 (Table 7-9A). This overlap probability

Table 7-8A

PROBABILITY OF A TITLE IN ANOTHER LIBRARY BEING DUPLICATED IN THE LISTED LIBRARIES SUBURBAN LIBRARY SYSTEM

1.	Bellwood	0.46
2.	Broadview	0.40
3.	Chicago Heights	0.48
4.	Downers Grove	0.62
5.	Elmwood Park	0.34
6.	Hinsdale	0.32
7.	Hometown	0.16
8.	Maywood	0.39
9.	Oak Park	0.54
10.	Park Forest	0.63
11.	Schiller Park	0.34
12.	Western Springs	0.43

Average Probability = 0.43

Table 7-8B

EXPECTED NUMBER OF DUPLICATIONS IN OTHER LIBRARIES OF A TITLE IN THE LISTED LIBRARIES SUBURBAN LIBRARY SYSTEM

1.	Bellwood	4.34
2.	Broadview	5.59
3.	Chicago Heights	4.30
4.	Downers Grove	4.17
5.	Elmwood Park	4.52
6.	Hinsdale	5.33
7.	Hometown	5.60
8.	Maywood	4.29
9.	Oak Park	4.11
10.	Park Forest	4.13
11.	Schiller Park	4.63
12.	Western Springs	5.11

Sample Average = 4.68

System Average = 19.89

Sharable Uses of Cataloging Information = 20.89

Table 7-8C

PROBABILITY OF A TITLE PUBLISHED FROM 1963 - 1967 BEING IN A LISTED LIBRARY SUBURBAN LIBRARY SYSTEM

1.	Bellwood	0.17
2.	Broadview	0.11
3.	Chicago Heights	0.17
4.	Downers Grove	0.23
5.	Elmwood Park	0.12
6.	Hinsdale	0.10
7.	Hometown	0.05
8.	Maywood	0.14
9.	Oak Park	0.20
10.	Park Forest	0.23
11.	Schiller Park	0.11
12.	Western Springs	0.13

Average Probability = 0.15

	Bellwood	Broadview	Chicago Heights	Downers Grove	Elmwood Park	Hinsdale	Hometown	Maywood	Oak Park	Park Forest	Schiller Park	Western Springs
Bellwood	119	42	57	71	41	32	16	40	63	74	36	45
Broadview	42	79	46	49	26	34	17	40	52	60	31	45
Chicago Heights	57	46	123	70	42	38	16	39	60	71	39	50
Downers Grove	71	49	70	159	59	45	24	58	83	97	44	63
Elmwood Park	41	26	42	59	86	21	13	39	40	50	27	33
Hinsdale	32	34	38	45	21	68	12	31	40	42	28	39
Hometown	16	17	16	24	13	12	34	14	20	26	17	16
Maywood	40	40	39	58	39	31	14	101	50	59	27	36
Oak Park	63	52	60	83	40	40	20	50	142	82	40	56
Park Forest	74	60	71	97	50	42	26	59	82	163	49	63
Schiller Park	36	31	39	44	27	28	17	27	40	49	80	32
Western Springs	45	45	50	63	33	39	16	36	56	63	32	95

Figure 7-8A. Title Overlap Matrix - Suburban Library System

	Bellwood	Broadview	Chicago Heights	Downers Grove	Elmwood Park	Hinsdale	Hometown	Maywood	Oak Park	Park Forest	Schiller Park	Western Springs
Bellwood		.35	.48	.60	.34	.27	.13	.34	.53	.62	.30	.38
Broadview	.53		.58	.62	.33	.43	.21	.51	.66	.76	.39	.57
Chicago Heights	.46	.37		.57	.34	.31	.13	.32	.49	.58	.32	.41
Downers Grove	.45	.31	.44		.37	.28	.15	.36	.52	.61	.28	.40
Elmwood Park	.48	.30	.49	.69		.24	.15	.45	.45	.58	.31	.38
Hinsdale	.47	.50	.56	.66	.31		.18	.46	.59	.62	.41	.57
Hometown	.47	.50	.47	.70	.38	.35		.41	.59	.76	.50	.47
Maywood	.40	.40	.39	.57	.39	.30	.14		.49	.58	.27	.36
Oak Park	.44	.37	.42	.58	.28	.28	.14	.35		.58	.28	.39
Park Forest	.45	.37	.44	.59	.31	.26	.16	.36	.50		.30	.39
Schiller Park	.45	.39	.49	.55	.34	.35	.21	.34	.50	.61		.40
Western Springs	.47	.50	.53	.66	.35	.41	.17	.43	.59	.66	.34	

Figure 7-8B. Overlap Probability Matrix - Suburban Library System

	Oak Park	Park Forest	Chicago Heights	Downers Grove
Oak Park	558	60	72	59
Park Forest	81	537	92	66
Chicago Heights	63	52	577	53
Downers Grove	76	62	89	541

Oak Park	0	.11	.12	.11
Park Forest	.14	0	.16	.12
Chicago Heights	.11	.10	0	.10
Downers Grove	.14	.11	.15	0

Figure 7-8C. Probability of Nonoverlapping Titles Among Four Large Libraries - Suburban Library System.

Table 7-9A

PROBABILITY OF A TITLE IN ANOTHER LIBRARY BEING DUPLICATED IN THE LISTED LIBRARIES HEADQUARTERS LIBRARIES AND R & R CENTERS

1.	Evanston	0.64	Average Probability = 0.54
2.	Joliet	0.40	
3.	Oak Park	0.45	
4.	Ottawa	0.37	
5.	Park Forest	0.53	
6.	Rockford	0.76	
7.	Wheaton	0.67	
8.	Chicago Public Library	0.63	Average Probability = 0.59
9.	Illinois State Library	0.54	
10.	Southern Illinois University	0.61	
11.	University of Illinois (Urbana)	0.57	

Table 7-9B

EXPECTED NUMBER OF DUPLICATIONS IN OTHER LIBRARIES OF A TITLE IN THE LISTED LIBRARIES HEADQUARTERS LIBRARIES AND R & R CENTERS

1.	Evanston	3.06	Sample Average = 3.27
2.	Joliet	3.30	
3.	Oak Park	3.60	
4.	Ottawa	3.69	Sharable Uses of Cataloging Information = 4.27
5.	Park Forest	3.55	
6.	Rockford	2.47	
7.	Wheaton	3.25	
8.	Chicago Public Library	1.81	Average (only the R & R Centers = 1.78
9.	Illinois State Library	1.96	
10.	Southern Illinois University	1.63	
11.	University of Illinois (Urbana)	1.71	

indicates a high degree of homogeneity among the seven collections. Rockford with a collection of more than 227,000 books showed the highest degree of overlap (0.76 on the average), whereas Ottawa with a collection of 53,000 showed the lowest, (0.37 on the average). Wheaton presents a somewhat anomalous picture in relation to collection size. Although its collection was the next to smallest, its average probability of duplication was 0.67 (67 percent). Oak Park was somewhat anomalous in the other direction. While Oak Park has a collection of 135,000 books, its average probability of overlap with the other headquarters libraries is 0.45 (45 percent).

There are 4.27 sharable uses of cataloging information among the seven headquarters libraries (Table 7-9B). That is, on the average, there will be 4.27 copies of the same title purchased among these seven libraries.

The average probability (obtained from Figure 7-9D) of finding a book in one of the remaining six headquarters libraries when the given book is not found in any of the other libraries is 0.16 (16 percent).

Title overlap among the four Research and Reference Centers and among the seven headquarters libraries was also studied to determine how the collections of the Centers complemented those of the headquarters libraries. The matrices for title overlap and overlap probability have been presented in Figures 7-1 and 7-2.

	Evanston	Joliet	Oak Park	Ottawa	Park Forest	Rockford	Wheaton		Chicago Public Library	Illinois State Library	Southern Illinois University	University of Illinois (Urbana)
Evanston	479	143	121	144	107	53	79		69	94	92	81
Joliet	55	567	73	79	66	35	44		59	59	60	71
Oak Park	42	82	558	87	60	35	34		37	53	43	49
Ottawa	38	61	60	585	45	27	33		42	45	60	55
Park Forest	49	96	81	94	537	32	45		57	75	63	75
Rockford	135	205	196	215	172	397	143		117	145	133	148
Wheaton	72	139	116	132	106	54	486		77	86	74	111
Chicago Public Library	166	244	213	245	212	132	181		382	143	123	111
Illinois State Library	122	175	160	179	161	90	121		74	451	88	98
Southern Illinois University	249	305	279	323	278	208	238		183	217	322	112
University of Illinois (Urbana)	223	301	280	303	275	208	260		156	212	97	337

	Evanston	Joliet	Oak Park	Ottawa	Park Forest	Rockford	Wheaton		Chicago Public Library	Illinois State Library	Southern Illinois University	University of Illinois (Urbana)
Evanston	0	.25	.22	.25	.20	.13	.16		.18	.21	.28	.24
Joliet	.11	0	.13	.13	.12	.09	.09		.15	.13	.19	.21
Oak Park	.09	.14	0	.15	.11	.09	.07		.10	.12	.13	.14
Ottawa	.08	.11	.11	0	.08	.07	.07		.11	.10	.19	.16
Park Forest	.10	.17	.15	.17	0	.08	.09		.15	.17	.19	.22
Rockford	.28	.36	.35	.37	.32	0	.29		.31	.32	.41	.44
Wheaton	.15	.24	.21	.22	.20	.14	0		.20	.19	.23	.33
Chicago Public Library	.35	.43	.38	.42	.39	.33	.37		0	.32	.38	.33
Illinois State Library	.25	.31	.29	.30	.30	.23	.25		.19	0	.27	.29
Southern Illinois University	.52	.54	.50	.55	.52	.52	.49		.48	.48	0	.33
University of Illinois (Urbana)	.46	.53	.50	.52	.51	.52	.53		.41	.47	.30	0

Figure 7-9D. Probability of Nonoverlapping Titles Among Headquarters

The degree of overlap was not as great as was expected. The Chicago Public Library and Southern Illinois University showed the greatest average overlap probabilities (with the 10 other libraries and Centers), 0.63 and 0.61, respectively (Table 7-9A). The University of Illinois and the Illinois State Library followed with 0.57 and 0.54, respectively.

The average overlap among the four Centers, 0.59, was a little higher than that between the headquarters libraries alone, 0.54.

There is an implication here that one would be just as likely to find books requested at the libraries of Rockford, Evanston, and Wheaton, all of whose average probabilities of duplication exceed those of the R and R Centers. However, examination of the overlap between each of the R & R centers and these libraries (Figure 7-2) shows only one instance of the overlap being higher than the average. The overlap between the State Library and Rockford was 0.64; none of the other libraries approached this degree of overlap with the R and R Centers.

The high degree of overlap between the Chicago Public Library (column 9 of Figure 7-2) and the headquarters libraries can be attributed to the Chicago Library being a municipal public library just as are the headquarters libraries. With its large collection it is not surprising that there is a 65 percent chance (average of first seven cells of column 9) of also finding a title from one of the other seven collections in the Chicago Public Library.

Data for nonoverlap probability among the headquarters libraries and R & R Centers are shown in Figure 7-9D. As would be expected, the chances are good that individual titles sought among the R and R centers will be found in one of the Centers. It is interesting to note that the Rockford Public Library shows a relatively high probability of holding a title that is not in one of the R and R centers (row 6, columns 9 to 12).

If a title is not in the Chicago Public Library, there is a relatively small probability that it will be found in the headquarters libraries or in the State Library. On the other hand, the probability is relatively high that a title will be found in the Southern Illinois University Library or the University of Illinois Library given that it is not in the Chicago Public Library.

Table 7-9C summarizes the average probability of nonoverlapping titles among the headquarters libraries and the R and R Centers.[1] Column 1 of the table lists the average conditional

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[1] Table 7-9C was obtained in the following manner. The matrix of Figure 7-9D was divided into four submatrices, or quadrants as shown. Column 1 was obtained by taking the average of the rows in Q2 (top of column 1 of table) and Q4 (bottom of column 1 of tables). Column 2 was obtained by averaging the rows in Q1 and Q3. Column 3 lists the row averages across the undivided matrix.

Q1	Q2
Q3	Q4

Columns 4 through 6 were obtained by averaging columns of the matrix in Figure 7-9D. Column 4 shows the averages for Q3 and Q4; column 5 lists averages for Q1 and Q2. Column 6 lists the column averages of the undivided matrix.

Table 7-9C

AVERAGE PROBABILITY OF NONOVERLAPPING TITLES

HEADQUARTERS LIBRARIES AND R & R CENTERS

Library	Average Conditional Probability That A Title Is In Listed Library, Given That Title Is Not In Other Libraries			Average Conditional Probability That A Title Is In Some Other Library, Given That Title Is Not In Listed Library		
	(1) 4 Libraries	(2) 7 Libraries	(3) 11 Libraries	(4) 4 Libraries	(5) 7 Libraries	(6) 11 Libraries
Evanston	0.23	0.20	0.21	0.39	0.14	0.24
Joliet	0.17	0.11	0.14	0.45	0.21	0.31
Oak Park	0.12	0.11	0.11	0.42	0.20	0.28
Ottawa	0.14	0.09	0.11	0.45	0.22	0.31
Park Forest	0.18	0.13	0.15	0.43	0.17	0.28
Rockford	0.37	0.33	0.35	0.43	0.10	0.23
Wheaton	0.24	0.19	0.21	0.41	0.13	0.24
Average	0.21	0.16	0.18	0.42	0.16	0.27
Chicago Public Library	0.34	0.38	0.37	0.36	0.17	0.23
Illinois State Library	0.25	0.28	0.27	0.42	0.18	0.25
Southern Illinois University	0.43	0.52	0.49	0.32	0.23	0.26
University of Illinois	0.39	0.51	0.48	0.32	0.25	0.27
Average	0.35	0.42	0.40	0.36	0.21	0.25

probabilities that a title is in a designated library of the 11 headquarters libraries of R and R Centers given that it is not in one of the R and R Centers. The average probability of the R and R Centers is 0.35 while, on the average, there is a probability of 0.21 that a title not in the R and R Centers will be found in a headquarters library.

Column 2 lists the average conditional probabilities that a title is in a designated library of the 11 libraries given that it is not in one of the headquarters libraries. Whereas the average probability that a title will be found in a headquarters library if it is not found in another headquarters library is 0.16, the average probability that the title will be found in one of the R and R Centers is 0.42, or more than two and one-half times greater.

Column 3 lists the average conditional probabilities that a title is in a designated library of the 11 libraries given that it is not in any of the other 10 libraries. Again, the average probability that a title will be found in one of the R and R Centers (0.40) is more than double the probability that a title will be found in a headquarters library (0.18).

Column 4 of Table 7-9C lists the average conditional probabilities that a title is in one of the R and R Centers given that it is not in a designated library of the 11 libraries. There is a higher average probability (0.42) that a title not found in a headquarters library will be found in an

R and R Center than that a title not found in an R and R Center will be found in another Center (0.36).

Column 5 lists the average conditional probabilities that a title is in one of the headquarters libraries given that it is not in a designated library of the 11 libraries. The average probabilities for the headquarters libraries and R and R Centers are both low, 0.16 and 0.21, respectively.

The average conditional probabilities that a title is in one of the 11 libraries given that it is not in a designated library of the 11 libraries is shown in column 6. Again, the average probabilities for the headquarters libraries and R and R Centers are nearly equal, 0.27 and 0.25, respectively.

7.5 Summary of Title Duplication Study

The data collected and analyzed in the title duplication study indicated a relatively high degree of homogeneity in the collections of the six Library Systems considered. The homogeneity was significantly higher for the headquarters libraries considered as a separate system. As would be expected, those libraries having the larger collections generally showed higher overlap, with respect to the smaller libraries, i.e., a title in a smaller library was, in general, much more likely to also be held by the larger libraries. The converse case was also true, the probability of a title in a larger collection also being found in a smaller library was generally small.

The nonoverlap probability data showed the generally very small chance of finding a title in a small collection when it is not present in a larger collection. This does not mean that small libraries would not have books that were not also held by larger libraries. It is obvious that out of any group of libraries of any size, there will always be unique titles in the collections. But on the average, the chances of locating any particular title in a small collection are very small especially if the title is not already in a larger collection.

8. A BIBLIOGRAPHIC DATA BANK

In this Section we discuss the objectives listed in Section 2 against the background of the data that have been presented in the intervening sections of the report. Specifically, we draw conclusions regarding the desirability of implementing the various forms of a bibliographic data bank and appraise their technical and economic feasibility.

Although the six Library Systems studied in this project are contiguous and their Directors meet regularly to discuss matters of common interest, it does not appear that the six Library Systems necessarily constitute an appropriate entity for establishing a bibliographic data bank. The Bur Oak and Starved Rock Library Systems, each covering more than 2,000 square miles, and with 18 and 20 libraries situated mainly in small rural communities, have resources and needs that differ greatly from the heavily populated suburban communities. The Northern Illinois Library System with 52 libraries scattered over an area of more than 5,000 square miles, includes mainly small communities with small book collections. Rockford, its headquarters library, however, is the largest community of the 190 in the study and has the second largest book collection.

The North Suburban Library System is distinctive in that its 28 libraries are generally situated in large suburban communities. Large per capita support has provided their libraries with extensive book collections. The libraries are located in a relatively small area of 625 square miles.

The Suburban Library System's 51 libraries are located in a smaller area and are found in mainly suburban communities. The DuPage Library System with 21 libraries is also in a small area with its libraries located predominantly in small suburban communities.

The libraries in the six Systems are relatively homogeneous as shown by the title duplication survey. Their collections overlap to a large extent and their chief differences are in size of collection not diversity of subject matter except as is reflected in size.

Only 27 of the 190 libraries have book collections exceeding 50,000 volumes, and 15 of these are located in the North Suburban Library System. Resource sharing would tend to be a one-directional path with interlibrary loan requests, for example, coming from the smaller libraries to the larger libraries and from the smaller Systems to the larger Systems.

This inference is corroborated by the data on interlibrary loans discussed in Section 6.2 which is summarized in Table 8-1.

As shown by the table, the major source of interlibrary loans in five of the Systems is the headquarters library, the largest library in the System. In the case of the DuPage Library System, the major source is the R and R Centers. The 17.3 percent of loans obtained from other member libraries in the DuPage Library System results partly from an effort to equalize loan sharing among libraries that hold a requested title. The Wheaton library, headquarters of the System, undoubtedly held a major

Table 8-1

INTERLIBRARY LOAN SOURCES[1]
SIX LIBRARY SYSTEMS

Library System	Percentage Loans Filled by Source				
	Headquarters Library	System Collection	Other Member Libraries	R and R Centers	Other
Bur Oak	74.1	1.4	-	22.4	2.1
DuPage	35.5	-	17.3[2]	47.2	-
North Suburban	54.4	7.0	-	37.8	0.8
Northern Illinois	93.6	-	-	6.4	-
Starved Rock	75.5[3]	-	-	24.5	-
Suburban	57.8[4]	2.9	4.2[5]	34.7	0.4

Notes:

[1] Period of survey varies from four months to one year; See Tables of Section 6 for details.

[2] System union catalog utilized.

[3] Includes books obtained from System collection.

[4] Includes two coheadquarter libraries.

[5] Includes one library included in partial System union catalog.

portion of titles also held by other member libraries. Of the 4.2 percent of loans contributed by other member libraries in the Suburban Library System, 3.6 percent was contributed by Downers Grove, whose adult nonfiction holdings are entered in a partial union catalog.

The figures of Table 8-1 which show member libraries contributing little to filling interlibrary loan requests have led a number of the Systems to develop union catalogs in hope of remedying the one-way flow or at least of sharing loan fulfillment to a greater extent, and to increase the effectiveness of the service. Because System libraries and the interlibrary loan services have to undergo a mutual education in developing the services, and because the services have not yet been in existence long enough to determine a pattern of loan requests and fulfillment, it was believed that development of union catalogs for interlibrary loan purposes would be beneficial.

Before we draw conclusions from the title duplication survey, it is of interest to estimate the size of the union catalogs under consideration. These estimates have been made from responses to question 4 of the cataloging questionnaire and the average probability of title duplication for each Library System.

Table 8-2 is a summary of the responses to question 4 of the cataloging questionnaire which asked for estimated percentages of library book collections in several categories. Reference books have been included in the adult nonfiction category, and

TABLE 8-2

BOOK COLLECTIONS BY CATEGORIES
MEMBER LIBRARIES 1968

	Bur Oak	DuPage	North Suburban	Northern Illinois	Starved Rock	Suburban	Total
No. Member Libraries	18	21	28	52	20	51	190
No. Libraries Reporting	11	18	27	26	10	39	134
Total Books in Libraries	315,897	463,342	1,587,781[1]	981,869	248,427	1,462,213	5,059,529
Total Books Reported	259,435	430,735	1,587,781	642,983	163,981	1,029,937	4,114,852
Percent Books Reported	82.1	93.0	100.0	65.5	66.0	70.4	81.3
Children's Books Reported	78,764	144,695	520,901	219,422	59.362	407,993	1,431,137
Percent of Total	30.3	33.6	32.8	34.1	36.2	39.6	34.8
Adult Fiction Reported	62,443	84,122	298,488	143,812	37,103	193,666	819,634
Percent of Total	24.1	19.5	18.8	22.4	22.6	18.8	19.9
Adult Nonfiction Reported	118,228	201,918	768,392	279,749	67,516	428,278	1,864,081
Percent of Total	45.6	46.9	48.4	43.5	41.2	41.6	45.3

Note: [1] Book collection data from 1 library not included in total.

children's, young adult, and juvenile books have all been placed in the children's category. The total number of books in the Table was obtained from the Library System profiles. The number of books reported includes those from libraries which returned the questionnaire and responded to question 4. The response ranged from 65.5 to 100 percent.

The category percentages of Table 8-2 are averages for the Library Systems. Appendix E contains separate tables listing percentage categories for each responding library in a System. The average percentage of children's books ranged from 30.3 to 39.6 percent for individual Systems and 34.8 percent for the six Systems. Adult fiction ranged from 18.8 to 24.1 percent of reported book collections for a 6-System average of 19.9 percent. Adult nonfiction ranged from 41.2 to 48.4 percent of reported book collections. The 6-System average was 45.3 percent.

By extending the percentages of Table 8-2 to the total collection of a System and using the title duplication data, estimates have been prepared of the number of unique titles that would appear in a union catalog consisting of one, two, or all three categories of books.

Table 8-3 lists the estimated number of unique titles in each Library System. The column marked "Derivation" explains the method of calculation. Using the category percentages for Bur Oak, for example, from Table 8-2, it is estimated that

Table 8-3

ESTIMATED BOOK COLLECTIONS AND UNIQUE TITLES BY CATEGORIES

MEMBER LIBRARIES 1968

		Derivation	Bur Oak	DuPage	North Suburban	Northern Illinois	Starved Rock	Suburban
(1)	Number Member Libraries		18	21	28	52	20	51
(2)	Titles in Member Libraries	Table 3-3	315,897	463,342	1,587,781	981,869	243,427	1,462,213
(3)	Children's Books	% (from	95,717	155,683	520,901	334,817	89,931	570,263
(4)	Adult Fiction	Table 8-2)	76,131	90,352	298,488	219,939	56,145	277,821
(5)	Adult Nonfiction	× (2)	144,049	217,307	768,392	427,113	102,351	614,129
(6)	Total Adult Books	(4) + (5)	220,180	307,659	1,066,880	647,052	158,496	891,950
(7)	Average Probability of Duplication	Table 7-2	0.37	0.37	0.48	0.38	0.38	0.43
(8)	Expected Number of Duplications	Table 7-2	7	8	13	21	8	21
	Total Collections							
(9)	Number Duplicated Titles	(2) × (7)	116,382	171,437	762,135	373,110	94,402	628,752
(10)	Number Unique Titles in Overlap	(9) ÷ (8)	16,697	21,430	63,511	17,767	11,800	29,941
(11)	Number Unique Nonduplicated Titles	(2) - (9)	199,015	291,905	825,646	608,759	154,025	833,461
(12)	Total Unique Titles	(10) + (11)	215,712	313,335	889,157	626,526	165,825	863,402
	Adult Fiction and Nonfiction							
(13)	Number Duplicated Titles	(6) × (7)	81,467	113,834	512,102	245,880	60,228	383,539
(14)	Number Unique Titles in Overlap	(13) ÷ (8)	11,638	14,229	42,675	11,709	7,529	18,264
(15)	Number Unique Nonduplicated Titles	(6) - (13)	138,713	193,825	554,778	401,172	98,268	508,411
(16)	Total Unique Titles	(14) + (15)	150,351	208,054	597,453	412,881	105,797	526,675
	Adult Nonfiction							
(17)	Number Duplicated Titles	(5) × (7)	53,298	80,403	368,828	162,303	38,893	264,075
(18)	Number Unique Titles in Overlap	(17) ÷ (8)	7,614	10,050	30,736	7,729	4,862	12,575
(19)	Number Unique Nonduplicated Titles	(5) - (17)	90,751	136,904	399,564	264,810	63,458	350,054
(20)	Total Unique Titles	(18) + (19)	98,365	146,954	430,300	272,539	68,320	362,629

there are 144,049 titles[1] of adult nonfiction, 95,717 titles of children's books, and 76,131 titles of adult fiction, for a total of 315,897 books in the 18 libraries of the System.

From Table 7-2, the average probability of duplication of the Bur Oak Library System is 0.37, hence, 116,882 of the total number of titles are duplicated among the 18 libraries. Since the average number of sharable uses of cataloging information (average number of duplications plus one) is 7 (6.83 rounded), there are an estimated 16,697 unique titles among the duplicated titles. These unique titles added to the 199,015 titles that are not duplicated gives a total of 215,712 unique titles. This is the number of catalog cards that would be expected to be found in a union catalog of the Bur Oak Library System for all categories of books.

Similar calculations give 150,351 cards in a System union catalog for adult fiction and nonfiction, and 98,365 cards for a union catalog of only adult nonfiction titles.

A union catalog for the three categories in the North Suburban Library System would contain an estimated 889,157 cards. A similar union catalog for the Suburban Library System would contain 863,402 cards. There would be 626,526, 313,335, and 165,825 cards in Northern Illinois, DuPage and Starved Rock union catalogs, respectively.

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[1] The distinction between volumes and titles has not always been made in answers to the library profiles and questionnaires. The number of unique titles would be reduced somewhat if volume figures rather than title figures were provided.

Table 8-3 also indicates the estimated number of catalog cards that would be contained in a union catalog for each Library System if only adult books were included, or if only adult nonfiction books were included. These figures are very large and suggest the magnitude of the task of developing a complete retrospective union catalog.

The union catalogs would grow apace with acquisitions. The number of unique titles estimated for annual acquisitions is shown in Table 8-4. The same category percentages are assumed as above. In addition, it has been assumed that title duplication and the number of duplicate titles is the same for acquisitions as for the presently held collections.

The Bur Oak union catalog would add 15,335 cards per year in the three categories, assuming future purchases were at the same level as 1967/1968. The increase for adult fiction and nonfiction is estimated at 10,688 titles, and 6,993 titles for only adult nonfiction.

The North Suburban Library System would add an estimated 88,449 cards per year for all three categories. The Suburban Library System would add 72,924, Northern Illinois 45,074, DuPage 37,994, and Starved Rock 8,387.

Table 8-4

ESTIMATED ACQUISITIONS AND UNIQUE TITLES BY CATEGORIES

MEMBER LIBRARIES 1968

	Derivation	Bur Oak	DuPage	North Suburban	Northern Illinois	Starved Rock	Suburban
(1) Number Member Libraries		18	21	28	52	20	51
(2) Acquisitions by Member Libraries	Table 3-4	22,457	56,183	157,945	70,638	12,438	123,500
(3) Children's Books	% (from	6,804	18,877	51,806	24 088	4,503	48,906
(4) Adult Fiction	Table 8-2	5,412	10,956	29,694	15,823	2,811	23,218
(5) Adult Nonfiction	× (2)	10,241	26,350	76,445	30,727	5,124	51,376
(6) Total Adult Books	(4) + (5)	15,653	37,306	106,139	46,550	7,935	74,594
(7) Average Probability of Duplication	Table 7-2	0.37	0.37	0.48	0.38	0.38	0.43
(8) Expected Number of Duplications	Table 7-2	7	8	13	21	8	21
Total Collections							
(9) Number Duplicated Titles	(2) × (7)	8,309	20,787	75,813	26,842	4,726	53,105
(10) Number Unique Titles in Overlap	(9) ÷ (8)	1,187	2,598	6,317	1,278	675	2,529
(11) Number Unique Nonduplicated Titles	(2) - (9)	14,148	35,396	82,132	43,796	7,712	70,395
(12) Total Unique Titles	(10) + (11)	15,335	37,994	88,449	45,074	8,387	72,924
Adult Fiction and Nonfiction							
(13) Number Duplicated Titles	(6) × (7)	5,792	13,803	50,947	17,689	3,015	32,075
(14) Number Unique Titles in Overlap	(13) ÷ (8)	827	1,725	4,245	842	431	1,527
(15) Number Unique Nonduplicated Titles	(6) - (13)	9,861	23,503	55,192	28,861	4,920	42,519
(16) Total Unique Titles	(14) + (15)	10,688	25,228	59,437	29,703	5,351	44,046
Adult Nonfiction							
(17) Number Duplicated Titles	(5) × (7)	3,789	9,749	36,694	11,676	1,947	22,092
(18) Number Unique Titles in Overlap	(17) ÷ (8)	541	1,218	3,057	556	278	1,052
(19) Number Unique Nonduplicated Titles	(5) - (17)	6,452	16,601	39,751	19,051	3,177	29,284
(20) Total Unique Titles	(18) + (19)	6,993	17,819	42,808	19,607	3,455	30,336

The above estimates assume a single catalog card for each unique title, a condition that does not now prevail inasmuch as no System or intersystem catalog standards have been adopted. Until standardization was adopted, the number of cards received annually for incorporation into a System union catalog would be many time the number shown in Table 8-4. On the average, there would be from 7 to 21 duplicate cards per title as found in the title duplication survey.

Inasmuch as most Library Systems project increases in acquisitions by member libraries, the annual addition of cards to a union catalog would increase over the years. Assuming a level rate of acquisitions over a 5-year period, however, the North Suburban Library System, for example, would add 88,449 cards per year for a total of 442,245 cards. This figure added to the 889,157 estimated cards in the current collection yields a total of 1,331,402 cards in a union catalog at the end of five years.

In addition, there would be added cards for System-held titles and for annual acquisitions of System titles. The estimated figures by categories for the six Library Systems are shown in Table 8-5. The same percentages for the various categories have been used as above. No attempt has been made to determine the number of unique titles for Table 8-5 because the number of titles are generally small.

Table 8-5

ESTIMATED BOOK COLLECTIONS AND ACQUISITIONS

SYSTEMS 1968

	Children's		Adult Fiction		Adult Nonfiction		Total	
	Coll.	Acq.	Coll.	Acq.	Coll.	Acq.	Coll.	Acq.
Bur Oak	5,454	5,454	4,338	4,338	8,208	8,208	18,000	18,000
DuPage	4,080	2,100	2,400	1,140	5,520	2,760	12,000	6,000
North Suburban	4,080	4,080	2,280	2,280	5,640	5,640	12,000	12,000
Northern Illinois	12,276	3,410	8,064	2,240	15,660	4,350	36,000	10,000
Starved Rock	7,602	3,620	4,746	2,260	8,652	4,120	21,000	10,000
Suburban	9,504	4,752	4,512	2,256	9,984	4,992	24,000	12,000

Given the estimated sizes of System union catalogs, it is believed that the cost of establishing and maintaining the catalogs will be excessive in consideration of the low probability of benefits for interlibrary loans. Since it has been shown in Section 7 that if a larger library does not have a title in its collection, the probability that a smaller library will have the title is generally very small, and since it has also been shown that the probability of finding a title among the R and R Centers is two and one-half times greater than among the headquarters libraries, it is more feasible to extend the cooperative effort between the R and R Centers and the Library Systems.

A union catalog could also be used to equalize loans between libraries. However, this presupposes generally equal size collections, a condition which exists mainly in the North Suburban Library System, and hardly at all in the other Systems. The probability of nonoverlap between the headquarters libraries and the three largest libraries (in the sample) for each System was shown to be very small.

Calls to the few larger libraries with a large probability of overlap would accomplish the same equalization purpose at less cost than a union catalog. Differential payments to libraries making an excess of loans would also be cheaper than developing and maintaining a union catalog for this purpose.

System union catalogs, therefore, would not be of great help to the interlibrary loan services in locating books within the System. If the contents of the union catalog were made available to the member libraries, however, in a book-form catalog, member libraries would be assisted in formulating their requests to the loan service or could direct requestors to the nearest library that held a copy of a desired book.

The union catalog as a locator directory would be most effective in book-form with a copy of the catalog in each member library. The union catalog could also serve a directory function as a card catalog in the headquarters library. In this case, however, potential borrowers would have to interrogate their local librarian who in turn would interrogate the headquarters library either directly by telephone or through the mail with its associated time delay.

In short, a System union catalog would not be of great assistance to the interlibrary loan service but would assist member libraries in locating books within the system. The latter function presupposes System-wide arrangements for reciprocal borrowing. A book-form catalog could be a by-product of an automated centralized processing facility as discussed in the following Section.

The above analysis confirms a conclusion of the recent study of Library Systems in Illinois:

> "Except in cases where libraries have very special and well-developed collections or where some cooperative efforts are possible, the investment in elaborate union catalogs does not seem worth-while. The gradual development of union catalogs based on a

> developing system collection supplemented by scope notes indicating particularly strong areas in member library collections seems a more feasible alternative."[2]

Perhaps a more natural grouping with much larger aggregate resources to serve an area's needs could be formed from the major libraries in the System areas. A union catalog containing the book holdings of the Joliet Public Library together with the holdings of any or all of the nearby academic libraries: Lewis College, College of St. Francis, three high schools and the planned Junior College, for example, would better provide interlibrary loan service than a union catalog of member libraries for the Bur Oak Library System.

Similarly, a union catalog of the Wheaton Public Library, Wheaton College, George Williams College, St. Procopius College, and Elmhurst College would establish a more varied pool of books to serve the DuPage Library System area than a union catalog of the 21 member libraries.

The analysis which led to a recommendation not to develop System union catalogs also holds for an intersystem union catalog of headquarters libraries collections. Estimated numbers of cards that would be in a headquarters library union catalog appear in Table 8-6.

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[2] Ralph H. Stenstrom, "The Emergence and Development of Public Library Systems in Illinois," Illinois State Library, Springfield, Illinois. December 1968. p. 38.

Table 8-6

ESTIMATED BOOK COLLECTIONS, ACQUISITIONS AND UNIQUE TITLES
BY CATEGORIES
HEADQUARTERS LIBRARIES 1968

	Children's		Adult Fiction		Adult Nonfiction		Total	
	Coll.	Acq.	Coll.	Acq.	Coll.	Acq.	Coll.	Acq.
Bur Oak (Joliet)	18,035	1,216	18,035	1,216	54,104	3,646	90,174	6,078
DuPage (Wheaton)	13,706	1,366	12,400	1,236	39,161	3,904	65,267	6,506
North Suburban (Evanston)	44,483	2,353	42,143	2,230	147,499	7,804	234,125	12,387
Northern Illinois (Rockford)	61,541	4,614	34,190	2,563	132,199	9,911	227,930	17,088
Starved Rock (Ottawa)	18,545	1,098	9,537	565	24,902	1,474	52,984	3,137
Suburban (Oak Park & Park Forest)	73,648	6,364	29,061	2,465	100,048	8,321	202,757	17,150
Total	229,958	17,011	145,366	10,275	497,913	35,060	873,237	62,346
Average Probability of Duplication	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Expected Number of Duplications	4	4	4	4	4	4	4	4
Number Duplicated Titles	124,177	9,186	78,498	5,549	268,873	18,932	471,548	33,667
Number Unique Titles in Overlap	31,044	2,296	19,624	1,387	67,218	4,733	117,887	8,417
Number Unique Nonduplicated Titles	105,781	7,825	66,868	4,726	229,040	16,128	401,689	28,679
Total Unique Titles	136,825	10,121	86,492	6,113	296,258	20,861	519,576	37,096

For all these categories, 519,576 titles would appear in the union catalog and 37,096 new titles would be added annually (assuming a constant acquisition rate). The respective figures for adult fiction and nonfiction are 382,750 unique titles in current collections and annual addition of 26,974 unique titles. A union catalog of only adult nonfiction would include 296,258 unique titles for current collections with 20,861 unique titles being added annually.

In Section 7 it has been shown that the average probability of finding a book in any one of six headquarters libraries given that it is not found in the seventh library is only 0.16. Thus if a book is not found in a patron's headquarters library, the chances of finding it in a different headquarters library are small. Because Rockford has a large collection, if a book is not found in any of the other six libraries, there is a 33 percent chance that it will be found in the Rockford Library. The chances of finding a book in the Evanston Library if it is not in one of the other headquarters libraries is only 13 percent. On the other hand, if a book is not in the Rockford collection, there is a scant 10 percent chance of finding it elsewhere. Hence, interlibrary loan requests among headquarters libraries would be from smaller to larger libraries with low probabilities of finding books in the libraries.

The probability figures of Section 7 are all based on sampling and averages and it is not possible to rule out the individual cases of small libraries having items that larger libraries lack. There are 190 libraries in the six systems and the chances are very good that some of these libraries will hold items that no other library does. However, in general it can be stated that the larger libraries will tend to more closely duplicate one another, and they will also be more likely to have titles that the smaller libraries will lack. Therefore, it becomes increasingly obvious that interlibrary loan traffic will constitute a nearly one-way flow with requests coming from smaller libraries to the largest ones, usually the headquarters library.

The cost of establishing and maintaining a System union catalog can be estimated by adding costs of the basic parameters. These costs include:

1. Materials
    a. Catalog cards
    b. Drawers
2. Storage cost (rental equivalent)
3. Personnel
    a. Establish catalog
    b. Maintain catalog
4. Library costs
    a. Current acquisitions - card duplication
    b. Retrospective collection
        (1) Catalog reproduction
        (2) Record keeping for withdrawals, losses, changes.

The materials and storage costs can be estimated by using the estimated number of catalog cards that would be included in a System union catalog. The number is dependent upon the categories of books that would be included and is the sum of System and member library collections as listed in the respective tables. The number of drawers required can be obtained by dividing the total number of catalog cards by 1,000 (average drawer contents). The storage space required for the drawers plus desk and work space can be estimated and appropriate costs allocated.

The personnel costs will vary with the Library System. A knowledge of cataloging and library operations would necessitate the personnel qualifications to be more than clerical.

One of the largest costs to the establishment and maintenance of a System union catalog would fall upon the participating libraries. This is especially true of a retrospective catalog. Reproduction of the shelf list will be costly and time consuming and will be dependent, in part, upon the method of card reproduction. Record keeping for withdrawal, losses and changes is also a cost that must be borne by participating libraries.

Inasmuch as the costs for each parameter will vary greatly for each Library System, detailed costs have not been estimated for individual Systems. We suggest that if these costs are detailed for any System, that they be projected for at least five years using the acquisitions estimates presented above.

We cannot envision a computer facility to process a union catalog as an activity to be undertaken by a Library System independent of centralized processing. Design specifications for a computer-oriented union catalog, therefore, have not been made. Preliminary steps towards this end are discussed in Section 9 in connection with a centralized processing facility.

The general conclusion from the title overlap studies is that intrasystem union catalogs will not be beneficial from the point of view of interlibrary loans and that the cost of establishing and maintaining union catalogs might be better allocated to other services. The same holds true for an intersystem union catalog of headquarters libraries holdings.

A state-wide union catalog that would include the larger System headquarters libraries, the R and R Centers, other large public libraries, and academic libraries would be of greater benefit than a union catalog of several headquarters libraries whose collections overlap to a large extent and are rather similar.

We believe that the development of a state-wide union catalog, constituted as described previously, would be the strongest step towards strengthening interlibrary loan services within the state. Hence, the attainment of objective 3, a regional interlibrary loan service, is partly dependent upon the implementation of objective 2, establishing a state-wide union catalog of selected libraries.

Sampled inventories of designated subject areas could indicate to Systems where supplementary books are needed in System collections and the collections of member libraries (objective 4a). The distribution of obligations to develop resources in selected fields (objective 6b) can be established by subject area sampling and a review of library shelf lists.

Cooperative collection building would probably be of great benefit to all of the Systems. It is important to have some idea of the holdings of libraries in a system to avoid a hodgepodge acquisition policy. However, a balance must be achieved in cooperative collection building and minimizing duplication so as not to inconvenience patrons. The public libraries should not be put in the position of becoming special libraries with narrow collections.

The development of resources in selected fields in designated libraries would be helpful in equalizing interlibrary loans among libraries. Even the smaller libraries could participate in this program although System financial support would be required. A distribution of strong subject area concentrations among libraries would assist in locating books by virtue of the greater probability of finding designated books in these collections. A union catalog would not be required for locating designated books within the concentrated collections.

The establishment of a clearinghouse for local specialized bibliographical collections can be initiated among the six Library Systems although a state-wide clearinghouse would appear to be a more desirable alternative.

In 1966, IIT Research Institute conducted a user survey for the Illinois Department of Business and Economic Development to assess interest in a central information facility that would include specialized collections of public libraries, special libraries and information centers. The outcome of the survey was a recommendation for establishing such a referral center.

In setting up a center, definition of a specialized collection would have to be established and eligible collections identified. The Ottawa, Joliet, Lockport, and Kankakee Public Libraries, for example, have collections of local history. Reddick's Library in Ottawa has nearly 1,000 volumes in a historical collection of the Starved Rock area. It would be interesting to determine the overlap between these specialized collections in the local public libraries, the Illinois State Library, and the Historical Societies in the state, however, in initiating a special collections project.

A cooperative "last copy" program to prevent discard of titles unique to a region could be a corollary to the specialized collections project. The Northern Illinois Library System has already initiated this program among its member libraries.

9. CENTRALIZED CATALOGING AND PROCESSING

Of 138 libraries responding to the questionnaire on the source of catalog cards, 134 do some or all of their own cataloging. Cataloging is performed by libraries that are nearly a century old with a long tradition of self-cataloging and by libraries formed within the past few years. Cataloging is performed by volunteer nonprofessionals in small libraries and by professional cataloging staffs in some of the larger libraries. Of 42 libraries that have contracted with the Illinois Library Materials Processing Center, only two receive 100 percent of their catalog cards from this source.

Although ostensibly using the same classification and cataloging rules, variances in classification and cataloging are found among libraries. This situation has been highlighted by the experience of several Library Systems that are developing union catalogs. When three or four libraries transmit catalog cards for the same book, the main entry cards often are different. The Suburban Library System selects one "preferred" card. The North Suburban Library System retains all cards.

Thus more than 90 years after Melvil Dewey called for cooperative cataloging and an end to the repetitious cataloging and recataloging of the same book, we still find libraries cataloging books that have already been cataloged. Given the small differences between cataloging requirements of the various libraries and given professional sources of cataloging such as Library of Congress catalog cards, we believe that the sharing of catalog services should be a primary goal of the Library Systems.

The two basic methods of sharing cataloging services are cooperative and centralized cataloging. In cooperative sharing, member libraries share in cataloging. A clearing house of some sort is implied in this arrangement whereby libraries can ascertain whether a book has been cataloged and to which catalog information can be transmitted. In centralized cataloging, one unit catalogs books for a number of libraries.

Either of the methods appear to be of great potential benefit to libraries. However, we believe that centralized cataloging as part of the services of a centralized book processing facility holds greater potential and provides a medium whereby many of the objectives of a bibliographic data bank can be achieved.

Centralized book processing centers have been studied, planned, and are operating in various parts of the nation. Some employ automation, others are entirely manual operations. Certain advantages have been ascribed to centralized processing: savings in money that accrue from batch purchasing and processing, freeing librarians of the burden of processing books thus allowing greater concentration on public service, better control of records and centralized cataloging. In addition the use of centralized processing, whether automated or manual, provides a common data base for the libraries utilizing the service. The common data base can be used to produce book-form catalogs of various types: union catalogs, author catalogs, subject catalogs, recent acquisitions and special collections.[1]

One of the disadvantages of centralized processing is the surrender of a certain amount of autonomy or individuality by member libraries. Centralized processing implies a certain degree of standardization for the sake of economy and efficiency; therefore, member libraries would have to accept mutually agreed upon standards in cataloging and other technical processes with only minimal changes being allowed. While it is possible to provide for a certain amount of custom work, a centralized processing center will probably be most economical with a maximum amount of standardization. Once this principle is accepted by member libraries, a centralized processing center should be able to provide its services at a price that will ensure savings for its members. However, recognizing the probable reluctance to give up local autonomy, and variations in cataloging and subject classification, some sort of middle ground will have to be agreed upon with respect to standardization.

The 190 member libraries of the six Library Systems purchased 443,161 books in fiscal 1968. Of these, only 93,275 were processed by the ILMPC for the 53 libraries that used the centralized processing facility. As noted in Section 5, the books processed constituted only 68 percent of the purchased books inasmuch as the libraries practiced selective processing.

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[1] The Bibliography contains an extensive list of books and papers on library automation, acquisitions, central processing, book catalogs, conversion and production costs and Library of Congress centralized cataloging and MARC program.

Given an average overlap of 40 percent for the six Systems, approximately 180,000 books were duplicated. The average number of duplications was 78. That most of these books were processed individually by different libraries and cataloged individually (in some cases the same book was cataloged 190 times), is an indication of some of the wastefulness of individual cataloging and processing.

The imminent implementation of a Standard Book Number (SBN) will provide a concise and standard code for ordering and identifying books. The SBN will also be a useful key for retrieving books from a bibliographic file.

The Library of Congress is expanding its cataloging operations to encompass most of the published monographs and in conjunction with its shared cataloging service will provide catalog cards for most books. Although individual libraries may question specific descriptive cataloging and classification, in general, the level of cataloging and classification is higher than that achievable by individual libraries. The availability of bibliographic information on MARC (Machine Readable Cataloging) tapes gives further impetus to an automated centralized processing facility. The MARC II bibliographic format has been approved by the American Library Association as a standard for communication of bibliographic data in machine readable form.

We believe that the ILMPC should be strengthened and expanded. Its relationship to the State Library and the other Library Systems in the state should be clarified inasmuch as it could serve more libraries throughout the state and it is questionable whether several similar centers should be developed. Rather than expending considerable sums of money on System union catalogs, the Systems could better use these funds by assisting member libraries to participate in ILMPC.

We believe that the reorganized ILMPC should be pointed in the direction of eventual automation. Towards this end, common standards of cataloging and classification should be adopted by member libraries based upon the Library of Congress MARC program. All bibliographical data used in ILMPC should be prepared in a form that is readily convertible for automatic processing without further editing, coding, or formatting. Standard Book Numbers may be used in place of or in addition to LC catalog card numbers.

The sooner machine readable bibliographic information is made available, the ultimate cost of preparing retrospective data for machine processing will be reduced, because a large pool of catalog cards and machinable data will be continually developing.

From the point of view of this study, a centralized processing facility will serve its own specific purpose and will, at the same time, provide the bases for developing the most desirable forms of a bibliographic data bank as a by-product.

A union catalog will be developed as the core of the centralized cataloging operation. Many applications can be made of this union catalog either in manual or machinable form. The eventual incorporation of the catalog in machinable form presents many opportunities for developing book-form catalogs, special bibliographical lists, etc.

Many libraries and communities have developed book-form catalogs. We do not recommend this catalog as a primary objective but its realization via automated centralized processing can bring benefits to some Library Systems, especially where it can serve as a System directory when reciprocal borrowing privileges are available.

IIT Research Institute, in an independent research program, is developing the basic computer programs for processing the MARC tapes to 1) print a catalog card, and 2) to produce a book-form catalog sorted according to designated keys. A sample page is attached for examination (Figure 9-1).[2]

The Suffolk and Nassau County Library Systems in New York have developed automated centralized processing systems and several networks of academic libraries are in process of development. Recently, the California State Library has issued a 3-volume study with detailed design and specifications for a processing center using MARC tapes in an automated center.

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[2] The LC classifications in Figure 9-1 can be interchanged with DDC.

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GAINES, ROBERT.
   AGAINST THE PUBLIC INTEREST. LONDON, MACDONALD
   <1959>                                PZ3.G1277AG
  244 P. 20 CM.

GERRISH, HOWARD H.
   ELECTRICITY, BY HOWARD H. GERRISH. WALTER C.
   BROWN, CONSULTING EDITOR. HOMEWOOD, ILL.,
   GOODHEART-WILLCOX CO. <1968>
  112 P. ILLUS. 27 CM.              TK146.G43 1968

GESSNER, ROBERT, 1907-
   THE MOVING IMAGE; A GUIDE TO CINEMATIC
   LITERACY. <1ST ED.> NEW YORK, DUTTON, 1968.
  444 P. ILLUS. 24 CM.                  PN1994.G43

GOLDRING, PATRICK.
   YUGOSLAVIA. <LONDON, COLLINS; CHICAGO, RAND
   MCNALLY, C1967>
  96 P. ILLUS., MAPS. 17 CM.       DR304.5.G64 1967

HAGGIN, BERNARD H., 1900-
   THE NEW LISTENER'S COMPANION AND RECORD GUIDE
   <BY> B. H. HAGGIN. 2D ED. NEW YORK, HORIZON
   PRESS <1968>
  349 P. MUSIC. 25 CM.               MT6.H142 1968

HALACY, DANIEL STEPHEN, 1919-
   ETHAN STRONG: STRIKE AND FIGHT BACK, BY DAN
   HALACY. ILLUSTRATED BY GEORGE GUZZI. NEW YORK,
   MCGRAW-HILL <1968>
  126 P. ILLUS. 22 CM.                 PZ7.H1282ET

HALL, BARBARA J.
   MEXICO IN PICTURES. PREPARED BY BARBARA J.
   HALL. <REV. ED.> NEW YORK, STERLING PUB. CO.
   <1968>
  64 P. ILLUS., MAPS. 26 CM.         F1216.M3 1968

HARRIS, SYDNEY J.
   LEAVING THE SURFACE, BY SYDNEY J. HARRIS.
   BOSTON, HOUGHTON MIFFLIN, 1968.
  412 P. 22 CM.                      PS3515.A762L4

HARTMAN, DAVID N.
   CALIFORNIA AND MAN <BY> DAVID N. HARTMAN. 2D
   ED. DUBUQUE, IOWA, W. C. BROWN CO. <1968>
  XVI, 478 P. ILLUS., MAPS. 23 CM.  F866.2.H3 1968

HARTWELL, DICKSON.
   DOGS AGAINST DARKNESS; THE STORY OF THE SEEING
   EYE. ENL. <I.E. 3D.> ED. NEW YORK, DODD MEAD
   <1968>
  VI, 278 P. ILLUS., PORTS. 21 CM.
                                  HV1780.S4H27 1968

HAWKINS, CHRISTOPHER, 1764-1837.
   THE ADVENTURES OF CHRISTOPHER HAWKINS. <WITH AN
   INTROD. AND NOTES BY CHARLES I. BUSHNELL. NEW
   YORK> NEW YORK TIMES <1968>
  X, 316 P. ILLUS., PORTS. 23 CM.   E281.H39 1968

HEDERMAN, ROBERT MICHAEL.
   THE HEDERMAN STORY; A SAGA OF THE PRINTED WORD
   IN MISSISSIPPI <BY> ROBERT M. HEDERMAN, JR. NEW
   YORK, NEWCOMEN SOCIETY IN NORTH AMERICA, 1966.
  28 P. 23 CM.                        PN4897.M596H4

HILLE, EINAR, 1894-
   FIRST-YEAR CALCULUS <BY> EINAR HILLE <AND>
   SATURNINO L. SALAS. WALTHAM, MASS., BLAISDELL
   PUB. CO. <1968>
  XI, 415 P. ILLUS. 26 CM.                QA303.H557

HOOPER, DOUGLAS.
   DISORDERED LIVES; AN INTERPERSONAL ACCOUNT <BY>
   DOUGLAS HOOPER <AND> JOHN ROBERTS. NEW YORK,
   HUMANITIES PRESS <1968, C1967>
  VIII, 87 P. 20 CM.                       HQ728.H65

HORWATH AND HORWATH, NEW YORK.
   EXPENSE AND PAYROLL DICTIONARY FOR CLUBS; FOR
   USE WITH THE SECOND REVISED EDITION (1967) OF
   THE UNIFORM SYSTEM OF ACCOUNTS FOR CLUBS.
   WASHINGTON, CLUB MANAGERS ASSOCIATION OF
   AMERICA <C1967>
  61 P. 24 CM.                   HF5686.C45H59 1967

HOWARD, ELIZABETH.
   WINTER ON HER OWN. NEW YORK, W. MORROW <1968>
  219 P. 21 CM.                         PZ7.H8327WI

HU, SZE-TSEN, 1914-
   INTRODUCTION TO HOMOLOGICAL ALGEBRA. SAN
   FRANCISCO, HOLDEN-DAY <1968>
  IX, 203 P. 24 CM.                    QA169.H8 1968

INGE, WILLIAM RALPH, 1860-1954.
   WIT AND WISDOM OF DEAN INGE, SELECTED AND ARR.
   BY SIR JAMES MARCHANT. WITH A PREF. BY WILLIAM
   RALPH INGE. NEW YORK, BOOKS FOR LIBRARIES PRESS
   <1968>
  XII, 132 P. 23 CM.                   AC8.I54 1968
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Figure 9-1. Page of Book-Form Catalog Formatted from Library of Congress MARC Tape

This study contains valuable suggestions and plans and could well serve as a model for eventual automation of centralized processing in Illinois.

The California processing center design has attempted to preserve, where technically possible, significant variations in local cataloging practice and notation. This is accomplished by having a holdings file incorporating variations in addition to the standard central bibliographic file. Output catalogs utilize either or both files to produce:

1. Union catalog of all libraries
2. Union catalog of a defined group of libraries
3. Separate catalog of one single library
4. Separate catalogs for each single library in a defined group of libraries.

An automated centralized processing facility might have its own computer and operations center. Such a facility could serve member libraries in numerous ways as some of the larger libraries move towards automated accounting, serials control, payroll, etc.

The six metropolitan Library Systems should fully participate in ILMPC and take steps now to prepare for eventual automation of acquisitions, cataloging, and the development of a machinable bibliographic data bank.

10. RECOMMENDATIONS

We list below specific recommendations derived from this study.

1. Union Catalogs

1.1 Library Systems that have not initiated a union catalog should not start one.

1.2 Library Systems that have begun development of a union catalog should reconsider its continuation in light of this study.

1.3 Steps should not be taken within the six Library Systems to develop an intersystem union catalog.

1.4 Steps should not be taken to develop a union catalog of headquarters libraries.

1.5 A state-wide union catalog should be developed to include selected large public libraries, academic libraries, and special libraries within the state.

1.6 Sub-regional union catalogs of larger public libraries and educational institutions can be investigated and developed on a sub-regional basis within the framework of or with due consideration to a state union catalog.

2. Interlibrary Loans

2.1 The state interlibrary loan system should be strengthened to facilitate resource sharing among libraries with diverse collections.

2.2 The larger libraries within a library system can usually be used to place interlibrary loan requests in addition to the headquarters library; these libraries may be used to locate desired books and to equalize loans among libraries.

3. Specialized Collections

3.1 A specialized collection should be defined (it should be more than a collection of books a library may hold by virtue of the size of its collection) and specialized collections held by libraries should be identified.

3.2 The State Library should be the coordinating library of the specialized collections in the state. Preferably, information concerning these collections could be obtained and disseminated as a part of the state-wide union catalog activity.

3.3 Library Systems and groupings of Library Systems can gather and disseminate information about the specialized collections of their constituent libraries pending the development of a State-wide information effort and in conjunction with a State activity.

4. Cooperative Collection Building

4.1 Library Systems can designate member libraries to develop collections in special fields (e.g., cooking, sports, hobbies, etc.) and can assist these libraries in building assigned collections. The collections can prevent undue duplication among libraries without prejudicing local library service to patrons.

4.2 The special collections can serve as a "first query" source in an extended interlibrary loan service.

5. Centralized Processing

5.1 Steps should be taken to design and implement a centralized processing facility that can be developed quickly and readily into an automated processing facility.

5.2 Efforts should be made by Library Systems to have member libraries participate in the processing facility on as near a 100 percent basis as possible.

5.3 Library Systems should extend financial support to member libraries, where needed, in utilizing the processing facility.

5.4 The processing facility should be widely based, preferably operating in cooperation with numerous Library Systems and the State Library.

5.5 The standards for book processing should be amenable to machine processing and should be acceptable to a majority of potential users.

5.6 Plans should be made to convert existing ILMPC files to machine readable form consistent with the standards established for the processing facility.

5.7 The eventual production of book-form catalogs in varied formats and to serve several purposes should be provided for in the design of the processing facility.

5.8 The resulting and developing union catalog of the processing facility should be organized to serve an interlibrary loan service in addition to its centralized cataloging function.

6. Cataloging Standards

6.1 A set of cataloging standards should be established by a community of users, preferably those associated with the central processing facility.

6.2 The standards should be based upon machine readable records, specifically the Library of Congress MARC bibliographical data content and format.

6.3 Library of Congress catalog cards should be used to the largest extent possible, due provision being made for substitutions of classification number (from LC to DDC) and, where desirable, from LC catalog card number to Standard Book Number.

6.4 An allowable list of exceptions and local variations in classification and cataloging should be drawn up that will afford individual libraries flexibility in their own operations but that will be consistent with centralized processing including cataloging.

7. Cooperative Cataloging

7.1 Pending full participation by all member libraries of a Library System in a centralized processing facility, steps should be taken to develop cooperative cataloging whereby libraries share their cataloging efforts and do not duplicate cataloging performed at another library.

7.2 Appropriate cataloging facilities should be made available by Library Systems, including authority lists, subject heading references, LC proof sheets and National Union Catalog.

8. Library Computer Center

8.1 The design of the automated centralized processing facility should consider provisions to provide eventual computer services to member libraries in the fields of library automation and financial operations.

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APPENDIX A

A BIBLIOGRAPHIC BANK FOR RESOURCE SHARING IN LIBRARY SYSTEMS

CATALOGING QUESTIONNAIRE

System ____

Library _______________________________________

Address _______________________________________

____

____

Phone _______________________________________

Librarian ____________________________________

Date completed _______________________________

Prepared by

IIT Research Institute
10 West 35th Street
Chicago, Illinois 60616
Phone: 312/225-9630, Ext. 5152

1. What type of public catalogs does your library have?

______ Card

______ Book form

______ Other (please specify) ______________________

____

2. Does your main library have more than one public catalog (e.g., young adult, children's, etc.)?

______ Yes ______ No (If no, skip to question 4)

3. Please indicate types of catalogs together with age/education characteristics of nonadult types. Do not include division or department catalogs.

_________________ age/education ___________________

_________________ age/education ___________________

_________________ age/education ___________________

_________________ age/education ___________________

_________________ age/education ___________________

(Please attach a representative card from each catalog to this questionnaire.)

4. What estimated percentages of your book collection fall in the following categories?

______% adult fiction

______% adult nonfiction

______% young adult (not included above)

______% children

______% other (please specify) ____________________

______% other (please specify) ____________________

____

100% Total

5. Does your library have branches? (Do not include bookmobiles.)

______ Yes ______ No (If no, skip to question 8)

6. How many branches are there? ________________

7. How are catalog cards provided for the branches?

______ obtained with books from Illinois Library Materials Processing Center

______ obtained from catalog card service

______ reproduced by main library

______ other (please specify) ________________

____

8. Does your library utilize the services of the Illinois Library Materials Processing Center?

______ Yes ______No (If no, skip to question 11)

9. Do you have a contract directly with the Center or do you work through your library system?

______ contract directly

______ work through library system

10. Do you use the catalog cards received from the Center in the exact format in which they are received, exclusive of adding or deleting cards from sets or adding data to the shelf list card?

______ Yes ______No

If no, please indicate what changes or additions are made.

______ change classification ____________________

____

____

______ modify entries ________________________

____

____

10. (cont'd):

______ other (please specify) ______________________

____

____

11. Does your library obtain cards from a catalog card service?

______ Yes ______No (If no, skip to question 15)

12. Which service do you use?

______ Library of Congress

______ Wilson

______ Other (please specify) ______________________

____

13. Of the catalog card sets you receive, what percentage of sets do you estimate are used? ______%

14. What estimated percentage of your current acquisitions are covered by the catalog card service? ______%

15. How many titles (books only) were cataloged through any source in the last fiscal year?

____

16. Indicate the estimated percentage of catalog card sets for the number of titles in question 15 that were obtained from each of the following sources.

______% Illinois Library Materials Processing Center

______% Subscription Service (including LC cards)

______% Cataloged by library

100% of Total

17. What is the source of descriptive cataloging information of books for which no catalog cards are received?

______ Library of Congress (indicate source below)

 ______ LC Union Catalog

 ______ LC proofs

______ Publishers Weekly or cumulated American Book Publishing Record

______ Other (please specify) ____________________

____

18. Are books always cataloged under the author's real name?

______ Yes ______ No (If yes, skip to question 20)

19. If No, are they entered under the following:

______ Pseudonym

______ Author's real name except where he is better known under pseudonym

______ According to standard bibliographies

______ According to the library's authority file (please specify authority) ________________

______ Other (please specify) ____________________

____

20. How are authors with the same name distinguished?

______ Author dates

______ Other (please specify) ____________________

____

____

21. How are biographies classified?

______ Under Dewey classification 920

______ Under "B"

______ Other (please specify) ____________________

____

22. How are editions indicated in the catalog (edition number, copyright date, etc.)?

____

____

____

23. How are series indicated in the catalog?

____

____

____

24. What subject heading authority is used?

______ Sears

______ Library of Congress

______ Other (please specify) ____________________

____

____

25. What classification system is used in your library?

______ None

______ Dewey

______ Other (please specify) ____________________

____

26. What edition of Dewey is used in current cataloging?

______ 14th ______15th ______ 16th ______17th

______ 7th abridged ______ 8th abridged ______ 9th abridged

27. Are Cutter numbers used?

______ Yes ______No (If yes, skip to question 29)

28. What designation other than classification number is used?

______ None

______ Author's surname initial

______ Other (please specify) ______________________

____

29. Are copy numbers used?

______ Yes ______No (If no, skip to question 31)

30. How are copy numbers indicated?

on catalog card ______________________________

in call number ______________________________

31. Is an inventory of the book collection taken periodically?

______ Yes ______No (If no, skip to question 33)

32. How often is the inventory taken?

____

____

____

33. When are items withdrawn from the shelf list?

______ after inventory if found missing

______ after waiting period if lost in circulation (indicate period) ____________________

______ after book is withdrawn from circulation because of obsolescence, wear out (without replacement)

____

____

____

34. What rules for filing catalog cards are used?

______ ALA filing rules

______ Other (please specify) ____________________

____

35. Have you made any major modifications of these rules?

______ Yes ______ No

If Yes, please specify ____________________

____

____

____

____

____

____

____

____

____

____

____

36. Below are listed items that could possibly appear in a Union Catalog. The number of items that can be included in a Union Catalog, however, are necessarily limited by storage space and cost. Please indicate the importance you attach to each item by placing a number, 1, 2, or 3, in front of each item.

1 designates an item that must be included to provide a minimum basis for identification and search;

2 designates an item that would be helpful to include for more extensive searching but is not essential for the basic purpose of a Union Catalog;

3 designates an item that need not be included in a Union Catalog.

______ Dewey classification number

______ LC classification number

______ Local library call number (if different from either above)

______ LC card number

______ Author

______ Title (not including subtitle)

______ Subtitle

______ Romanized (transliterated) title (if book is in a foreign language)

______ Translated title (if book is in a foreign language)

______ Edition statement

______ Imprint: place

______ Imprint: publisher

______ Imprint: date

______ Collation: pagination

______ Collation: illustrations

______ Collation: height and thickness

36. (cont'd):

______ Series note: personal name - title

______ Series note: corporate name - title

______ Series note: conference - title

______ Bibliographic note: bibliography note

______ Bibliographic note: dissertation note

______ Bibliographic note: contents note

______ Bibliographic note: "bound with" note

______ Bibliographic note: general notes

______ Subject added entry: personal name

______ Subject added entry: corporate name

______ Subject added entry: conference or meeting

______ Subject added entry: uniform title heading

______ Subject added entry: topical subject heading

______ Subject added entry: subject subdivision

______ Added entry: personal name

______ Added entry: corporate name

______ Added entry: "joint author" and "joint compiler"

______ Added entry: conference or meeting

______ Added entry: uniform title heading

______ Added entry: title traced differently

______ Added entry: proper name not capable of authorship

______ Added entry: "editor," when main entry is not a personal name

36. (cont'd):

______ Series added entry: personal name - title

______ Series added entry: corporate name - title

______ Series added entry: conference or meeting - title

______ Series added entry: title

______ Annotation

______ Identification of holding library

______ List price

______ Other (please specify)

______ ____

______ ____

______ ____

______ ____

______ ____

37. Below are listed categories of books that could appear in a Union Catalog of book collections of system libraries. Please indicate the importance you assign to each category by placing a number, 1, 2, or 3, in front of the category. A 1 designates a basic category that must appear in the catalog. A 2 designates a category that you would find useful if it appeared, but the category is not a "must". A 3 designates a category that could be eliminated from a Untion Catalog.

______ Adult fiction

______ Adult nonfiction

______ Young adult

______ Children

______ Adult reference

______ Young adult reference

______ Foreign language

x

37. (cont'd):

______ Large print

______ Paperback with paper cover

______ Paper bound (paper cover replaced with hard cover)

______ Other (please specify) ____________________

______ Other ____________________

______ Other ____________________

______ Other ____________________

38. Which rules should the System adopt for

Classification? ____________________

____

____

____

____

Cataloging? ____________________

____

____

____

____

Filing? ____________________

____

____

____

____

APPENDIX B

SOURCES OF CATALOG CARDS BY LIBRARIES IN SIX LIBRARY SYSTEMS

Table B-1

SOURCE OF CATALOG CARDS
BUR OAK LIBRARY SYSTEM

Library	Percentage		
	ILMPC	Card Services	By Library
Bradley	-	-	100
Frankfort	-	50	50
Joliet	-	-	100
Lockport	100	-	-
Kankakee	-	-	100
Mokena	-	-	100
Momence	-	10[1]	90
Oswego	-	-	100
Plainfield	-	50[2]	50
Plano	-	-	100
Yorkville	-	5	95

Notes: [1] 10% obtained from System.

[2] Includes cards obtained from System.

Table B-2

SOURCE OF CATALOG CARDS
DUPAGE LIBRARY SYSTEM

Library	Percentage		
	ILMPC	Card Services	By Library
Batavia	-	10	90
Bensenville	-	40	60
Carol Stream	-	5	95
Elburn	-	30	70
Franklin Park	60	20	20
Geneva	75	-	25
Glen Ellyn	-	-	100
Itasca	-	68	32
Kaneville	-	40	60
Lombard	80	1	19
Naperville	50	-	50
North Aurora	-	-	100
Roselle	-	30	70
St. Charles	-	50	50
Sugar Grove	5	5	90
Villa Park	-	1	99
Wheaton	75	-	25
Wood Dale	-	-	100

Table B-3

SOURCE OF CATALOG CARDS
NORTH SUBURBAN LIBRARY SYSTEM

Library	Percentage		
	ILMPC	Card Services	By Library
Arlington Heights	-	10	90
Barrington	-	-	100
Deerfield	80	-	20
Des Plaines	-	30	70
Dundee	-	-	100
Elgin	-	65	35
Elk Grove	-	25	75
Evanston	-	80	20
Glencoe	-	30	70
Glenview	79	1	20
Lake Forest	-	1	99
Libertyville	75	-	25
Morton Grove	60	-	40
Mt. Prospect	-	35	65
Mundelein	-	-	100
Niles	-	75	25
Northbrook	60	-	40
Palatine	-	90	10
Park Ridge	-	-	100
Rolling Meadows	-	10	90
Schaumburg	-	80	20
Skokie	-	70	30
Waukegan	-	45	55
Wheeling	-	30	70
Winnetka	-	55	45

Table B-4

SOURCE OF CATALOG CARDS
NORTHERN ILLINOIS LIBRARY SYSTEM

Library	Percentage		
	ILMPC	Card Services	By Library
Algonquin	50	-	50
Antioch	-	1	99
DeKalb	80	5	15
Fox River Grove	-	-	100
Freeport	33	50	17
Galena	25	-	75
Hampshire	-	2	98
Hanover	-	-	100
Harvard	25	25	50
Lake Villa	-	20	80
Lanark	-	-	100
Loves Park	10	10	80
Malta	100	-	-
Maple Park	-	-	100
Marengo	-	60	40
McHenry Public	-	10	90
Mount Morris	-	-	100
Pecatonica	43	-	57
Rochelle	30	10	60
Rock Falls	-	-	100

Table B-4 (cont'd)

Library	Percentage		
	ILMPC	Card Services	By Library
Rockford	-	2	98
Rockton	50	25	25
Shabbona	-	-	100
South Beloit	-	1	99
Sterling	-	-	100
Stillman Valley	20	-	80
Stockton	50	-	50
Sycamore	-	70	30
Warren	80	5	15
Woodstock	50	40	10

Table B-5

SOURCE OF CATALOG CARDS
STARVED ROCK LIBRARY SYSTEM

Library	Percentage		
	ILMPC	Card Services	By Library
Earl Township	-	-	100
Marseilles	-	-	100
Mendota	-	20	80
Ottawa	99	-	1
Peru	-	25	75
Sandwich	-	-	100
Seneca	-	-	100
Spring Valley	-	100	-
Wyanet	-	-	100

Table B-6

SOURCE OF CATALOG CARDS
SUBURBAN LIBRARY SYSTEM

Library	Percentage		
	ILMPC	Card Services	By Library
Bedford Park	-	90	10
Bellwood	70	-	30
Berkeley	-	75	25
Blue Island	2[1]	8	90
Broadview	-	71	29
Chicago Heights	-	55	45
Country Club Hills	-	25	75
Crete	-	-	100
Dolton	-	100	-
Downers Grove	90	-	10
Elmwood Park	80	-	20
Flossmoor	10	5	85
Forest Park	-	14	86
Harvey	75	-	25
Hillside	-	37	63
Hinsdale	-	20	80
Hometown	-	65	35
LaGrange	70	20	10
Lisle	-	15	85
Lyons	-	25	75
Markham	-	85	15
Matteson	-	75	25
Maywood	-	15	85
Melrose Park	70	5	25
Midlothian	-	-	100
Northlake	-	20	80

Table B-6 (cont'd)

Library	Percentage		
	ILMPC	Card Services	By Library
Oak Forest	-	75	25
Oak Lawn	-	95	5
Oak Park	64	-	36
Orland Park	-	-	100
Palos Heights	-	25	75
Palos Hills	-	-	100
Palos Park	-	-	100
Park Forest	-	40	60
River Forest	98	-	2
River Grove	-	40	60
Riverside	75	20	5
Schiller Park	95	4	1
South Holland	-	60	40
Stickney - Forest View	-	-	100
Summit - Argo	-	20	80
Tinley Park	75	10	15
Western Springs	75	5	20
Westmont	35	-	65
Worth	-	75	25

Note: [1] Terminated participation in ILMPC.

APPENDIX C

BOOK PROCESSING BY LIBRARIES
BELONGING TO
ILLINOIS LIBRARY MATERIALS PROCESSING CENTER

Table C-1

BOOK PROCESSING BY LIBRARIES BELONGING TO ILMPC
BUR OAK LIBRARY SYSTEM

Library	Year of Founding	Volumes in Collection	Book Acquisitions 1968	Source of Catalog Cards					
				ILMPC		Card Services		By Library	
				%	Vols.	%	Vols.	%	Vols.
Lockport	1921	39,883	4,093	100	4,093	-	-	-	-

Table C-2

BOOK PROCESSING BY LIBRARIES BELONGING TO ILMPC
DUPAGE LIBRARY SYSTEM

Library	Year of Founding	Volumes in Collection	Book Acquisitions 1968	Source of Catalog Cards					
				ILMPC		Card Services		By Library	
				%	Vols.	%	Vols.	%	Vols.
Franklin Park	1940	28,832	6,279	60	3,767	20	1,256	20	1,256
Geneva	1894	36,882	3,735	75	2,801	-	-	25	934
Lombard	1927	33,140	5,211	80	4,169	1	52	19	990
Naperville	1897	34,602	3,925	50	1,963	-	-	50	1,962
Sugar Grove	1962	4,727	804	5	40	5	40	90	724
Wheaton	1891	65,267	6,506	75	4,880	-	-	25	1,626
DuPage Library System			6,000	100	6,000	-	-	-	-
System Total			32,460	73	23,620	4	1,348	23	7,492

Table C-3

BOOK PROCESSING BY LIBRARIES BELONGING TO ILMPC
NORTH SUBURBAN LIBRARY SYSTEM

Library	Year of Founding	Volumes in Collection	Book Acquisitions 1968	Source of Catalog Cards					
				ILMPC		Card Services		By Library	
				%	Vols.	%	Vols.	%	Vols.
Deerfield	1929	28,442	3,100	80	2,480	-	-	20	620
Glenview	1930	68,417	6,113	79	4,829	1	61	20	1,223
Libertyville	1923	36,003	3,122	75	2,342	-	-	25	780
Morton Grove	1941	45,742	3,765	60	2,259	-	-	40	1,506
Northbrook	1952	35,961	5,379	60	3,227	-	-	40	2,152
System Total			21,479	71	15,137	(0.3)	61	29	6,281

Table C-4

BOOK PROCESSING BY LIBRARIES BELONGING TO ILMPC
NORTHERN ILLINOIS LIBRARY SYSTEM

Library	Year of Founding	Volumes in Collection	Book Acquisitions 1968	Source of Catalog Cards					
				ILMPC		Card Services		By Library	
				%	Vols.	%	Vols.	%	Vols.
Algonquin	1921	10,569	966	50	483	-	-	50	483
DeKalb	1893	48,517	3,097	80	2,478	5	155	15	484
Freeport	1889	69,131	8,635	33	2,850	50	4,318	17	1,467
Galena	NA	20,241	980	25	245	-	-	75	735
Harvard	1909	16,086	1,014	25	254	25	506	50	254
Loves Park	1943	36,159	2,298	10	230	10	230	80	1,838
Malta	1920	5,225	196	100	196	-	-	-	-
Pecatonica	1962	4,000	938	43	403	-	-	57	535
Rochelle	1890	20,901	1,307	30	392	10	131	60	784
Rockton	1888	10,222	797	50	399	25	199	25	199
Stillman Valley	1924	10,169	170	20	34	-	-	80	136
Stockton	1903	13,132	635	50	318	-	-	50	317
Warren	1874	5,195	358	80	286	5	18	15	54
Woodstock	1891	24,229	2,633	50	1,316	40	1,053	10	264
System Total[1]			24,024	41	9,884	28	6,610	31	7,530

Note: [1] Nine libraries not listed. NA = Not Available

Table C-5

BOOK PROCESSING BY LIBRARIES BELONGING TO ILMPC
STARVED ROCK LIBRARY SYSTEM

Library	Year of Founding	Volumes in Collection	Book Acquisitions 1968	Source of Catalog Cards					
				ILMPC		Card Services		By Library	
				%	Vols.	%	Vols.	%	Vols.
Ottawa	1888	52,984	3,137	99	3,106	-	-	1	31

Table C-6

BOOK PROCESSING BY LIBRARIES BELONGING TO ILMPC

SUBURBAN LIBRARY SYSTEM

Library	Year of Founding	Volumes in Collection	Book Acquisitions 1968	Source of Catalog Cards					
				ILMPC		Card Services		By Library	
				%	Vols.	%	Vols.	%	Vols.
Bellwood	1934	41,135	4,807	70	3,365	-	-	30	1,442
Chicago Ridge	1960	7,153	(1,235)[1]		Joined May 1969				
Downers Grove	1911	57,162	5,885	90	5,297	-	-	10	588
Elmwood Park	1936	33,041	1,801	80	1,441	-	-	20	360
Flossmoor	1954	21,347	3,873	10	387	5	194	85	3,292
Harvey	NA	NA	2,530	75	1,897	-	-	25	633
LaGrange	1904	41,864	4,084	70	2,859	20	817	10	408
Melrose Park	1897	34,185	4,004	70	2,803	5	200	25	1,001
Oak Park	1903	135,278	10,736	64	6,871	-	-	36	3,865
River Forest	1899	26,857	2,233	98	2,188	-	-	2	45
Riverside	1930	32,426	2,742	75	2,057	20	548	5	137

Table C-6 (cont'd)

Library	Year of Founding	Volumes in Collection	Book Acquisitions 1968	Source of Catalog Cards					
				ILMPC		Card Services		By Library	
				%	Vols.	%	Vols.	%	Vols.
Schiller Park	1961	21,137	4,727	95	4,491	4	189	1	47
Tinley Park	1960	10,620	1,356	75	1,017	10	136	15	203
Western Springs	1932	31,963	3,292	75	2,469	5	165	20	658
Westmont	1940	13,500	978	30	293	-	-	70	685
Worth	1963	1,604	(786)[1]	New Member					
System Total[2]			53,048	71	37,435	4	2,249	25	13,364

Notes: [1] Not included in total.
[2] One library not listed.

APPENDIX D

SAMPLE DESIGN OF TITLE DUPLICATION SURVEY

The sample size was selected on the basis of assuming a binomial distribution for the title overlap percentages. The number of titles in the sample was obtained from the formula

$$n \geq pq\left(\frac{Z}{E}\right)^2$$

where n = sample size
p = actual proportion of overlap
q = experimental proportion of overlap = (1-p)
Z = standard normal deviate at a confidence level P
E = allowable error between p and q.

In the present case, E was chosen to be 5 percent and P to be 99 percent. Substituting the values of Z for P = 0.99 from a normal table (Z = 2.58), 0.05 for E, and assuming the worst possible case (requiring the largest n) where p = 0.5[1], we obtain

$$n \geq (0.5)(1-0.5)\left(\frac{2.58}{0.05}\right)^2$$

$$n \geq 665.$$

The number was rounded to 700.

---

[1] This assumption can be shown to be justified by referring to any standard statistics text, e.g., John E. Freund, Modern Elementary Statistics, Prentice-Hall, 1967, p. 276.

With a sample size of 700, the error between the actual and calculated proportions of overlap among the libraries studied will be no worse than ± 0.05 at a confidence level of 99 percent. In a statistical experiment, one can only obtain estimates of the actual overlap proportions. These values will fall into a range which is covered by a confidence interval or level. In the present study, the confidence level of 99 percent means that if the experiment were carried out a large number of times, the values obtained would fall into the range covered by the true overlap proportions 99 percent of the time. In other words, there is only a 1 percent chance that the values obtained are more than 5 percent from the actual values for the systems as a whole.

APPENDIX E

ESTIMATED HOLDINGS AND ANNUAL ACQUISITIONS BY CATEGORIES IN SIX LIBRARY SYSTEMS

Table E-1

ESTIMATED HOLDINGS AND ANNUAL ACQUISITIONS BY CATEGORIES

BUR OAK LIBRARY SYSTEM

Library	BOOK COLLECTIONS							ACQUISITIONS (1968)			
	Total	Adult Fiction		Adult Nonfiction		Children's		Total	Adult Fiction	Adult Nonfiction	Children's
		%	Vols.	%	Vols.	%	Vols.				
Bradley	9,253	30	2,776	40	3,701	30	2,776	515	155	205	155
Frankfort	3,821	32	1,223	29	1,108	39	1,490	766	245	222	299
Joliet	90,174	20	18,035	60	54,104	20	18,035	6,076	1,215	3,646	1,215
Kankakee	59,898	21	12,579	50	29,949	29	17,370	1,939	407	970	562
Lockport	39,883	30	11,965	30	11,965	40	15,953	4,093	1,228	1,228	1,637
Mokena	1,498	20	300	50	749	30	449	500	100	250	150
Momence	10,786	31	3,344	29	3,128	40	4,314	190	59	55	76
Oswego	12,218	25	3,055	25	3,055	50	6,108	1,223	306	306	611
Plainfield	12,687	29	3,679	30	3,806	41	5,202	799	232	240	327
Plano	12,391	25	3,098	40	4,956	35	4,337	543	136	217	190
Yorkville	6,826	35	2,389	25	1,707	40	2,730	821	287	205	329
Totals	259,435	24	62,443	46	118,228	30	78,764	17,465	4,370	7,544	5,551

Table E-2

ESTIMATED HOLDINGS AND ANNUAL ACQUISITIONS BY CATEGORIES

DUPAGE LIBRARY SYSTEM

Library	BOOK COLLECTIONS							ACQUISITIONS (1968)			
	Total	Adult Fiction		Adult Nonfiction		Children's		Total	Adult Fiction	Adult Nonfiction	Children's
		%	Vols.	%	Vols.	%	Vols.				
Addison	18,638	18	3,355	35	6,523	47	8,760	5,965	1,074	2,088	2,803
Batavia	24,930	25	6,233	40	9,972	35	8,725	1,940	485	775	680
Bensenville	14,531	20	2,906	30	4,359	50	7,266	1,459	292	438	729
Elburn	9,209	35	3,223	30	2,763	35	3,223	436	152	132	152
Franklin Park	28,832	13	3,748	49	14,128	38	10,956	6,279	816	3,077	2,386
Geneva	36,882	20	7,376	50	18,441	30	11,065	3,735	747	1,868	1,120
Glen Ellyn	41,725	15	6,259	52	21,697	33	13,769	5,282	792	2,747	1,743
Itasca	10,262	17	1,745	45	4,618	38	3,899	916	156	412	348
Kaneville	3,620	25	905	23	833	52	1,882	250	62	58	130
Lombard	33,140	25	8,285	35	11,599	40	13,256	5,211	1,303	1,824	2,084
Naperville	34,602	21	7,266	46	15,917	33	11,419	3,925	824	1,806	1,295
North Aurora	6,240	26	1,622	26	1,622	48	2,996	955	248	248	459
Roselle	16,506	20	3,302	40	6,602	40	6,602	1,292	258	517	517
St. Charles	39,899	17	6,783	47	18,753	36	14,363	4,224	718	1,985	1,521
Streamwood	5,640	25	1,410	33	1,861	42	2,369	1,445	361	477	607
Sugar Grove	4,727	40	1,891	30	1,418	30	1,418	804	342	231	231
Villa Park	36,085	15	5,413	60	21,651	25	9,021	3,388	508	2,033	847
Wheaton	65,267	19	12,400	60	39,161	21	13,706	6,506	1,236	3,904	1,366
Totals	430,735	19	84,122	47	201,918	34	144,695	54,012	10,374	24,620	19,018

Table E-3

ESTIMATED HOLDINGS AND ANNUAL ACQUISITIONS BY CATEGORIES

NORTH SUBURBAN LIBRARY SYSTEM

Library	BOOK COLLECTIONS							ACQUISITIONS (1968)			
	Total	Adult Fiction		Adult Nonfiction		Children's		Total	Adult Fiction	Adult Nonfiction	Children's
		%	Vols.	%	Vols.	%	Vols.				
Arlington Heights	58,537	25	14,634	25	14,634	50	29,269	8,792	2,198	2,198	4,396
Barrington	25,176	23	5,790	44	11,078	33	8,308	3,476	799	1,529	1,148
Deerfield	28,442	25	7,110	44	12,515	31	8,817	3,100	775	1,364	961
DesPlaines	72,229	15	10,834	50	36,115	35	25,280	6,633	995	3,317	2,321
Dundee	48,259	25	12,065	50	24,129	25	12,065	6,644	1,661	3,322	1,661
Elgin	84,390	25	21,097	50	42,196	25	21,097	8,574	2,143	4,288	2,143
Elk Grove	22,722	16	3,636	25	5,681	59	13,405	3,263	522	816	1,925
Evanston	234,125	18	42,143	63	147,499	19	44,483	12,387	2 230	7,804	2,353
Glencoe	47,767	20	9,553	57	27,227	23	10,987	3,562	712	2,030	820
Glenview	68,417	17	11,631	50	34,209	33	22,577	6,113	1,039	3,057	2,017
Lake Forest	60,024	25	15,006	50	30,012	25	15,006	2,916	729	1,458	729
Libertyville	36,003	21	7,561	39	14,041	40	14,041	3,122	656	1,218	1,248
Morton Grove	45,742	20	9,148	30	13,723	50	22,871	3,765	753	1,130	1,882
Mt. Prospect	51,262	18	9,227	42	21,530	40	20,505	4,893	881	2,055	1,957
Mundelein	14,015	20	2,803	27	3,784	53	7,428	1,344	269	363	712
Niles	44,730	15	6,710	42	18,787	43	19,233	7,376	1,106	3,098	3,172
Northbrook	35,961	25	8,990	38	13,665	37	13,306	5,379	1,345	2,044	1,990
Palatine	36,335	20	7,267	55	19,984	25	9,084	8,194	1,639	4,507	2,048
Park Ridge	65,566	18	11,802	44	28,849	38	24,915	6,854	1,234	3,016	2,604
Prospect Heights	16,038	25	4,010	25	4,010	50	8,018	1,050	263	263	524
Rolling Meadows	18,535	22	4,078	36	6,673	42	7,784	2,426	534	873	1,019
Schaumburg	19,885	20	3,977	47	9,346	33	6,562	4,000	800	1,880	1,320
Skokie	174,371	15	26,156	51	88,929	34	59,286	19,452	2,918	9,921	6,613
Waukegan	124,981	12	14,998	46	57,491	42	52,492	10,835	1,300	4,984	4,551
Wheeling	18,196	23	4,185	38	6,914	39	7,097	2,221	511	844	866
Wilmette	78,421	16	12,547	52	40,779	32	25,095	7,424	1,188	3,860	2,376
Winnetka	57,652	20	11,530	60	34,592	20	11,530	3,968	794	2,380	794
Totals	1,587,781	19	298,488	48	768,392	33	520,901	157,945	30,040	73,665	54,240

Table E-4

ESTIMATED HOLDINGS AND ANNUAL ACQUISITIONS BY CATEGORIES
NORTHERN ILLINOIS LIBRARY SYSTEM

Library	BOOK COLLECTIONS							ACQUISITIONS (1968)			
	Total	Adult Fiction		Adult Nonfiction		Children's		Total	Adult Fiction	Adult Nonfiction	Children's
		%	Vols.	%	Vols.	%	Vols.				
Algonquin	10,569	23	2,431	13	1,374	64	6,764	966	222	126	618
Antioch	22,623	20	4,525	35	7,918	45	10,180	1,622	324	568	730
DeKalb	48,517	18	8,733	39	18,922	43	20,862	3,097	557	1,208	1,332
Elizabeth	3,723	40	1,489	25	931	35	1,303	48	19	12	17
Fox River Grove	6,991	38	2,657	21	1,468	41	2,866	376	143	79	154
Freeport	69,131	25	17,283	46	31,800	29	20,048	8,635	2,159	3,972	2,504
Galena	20,241	20	4,049	40	8,096	40	8,096	980	196	392	392
Hampshire	10,610	30	3,183	30	3,183	40	4,244	318	95	95	128
Hanover	5,645	30	1,694	30	1,694	40	2,257	370	111	111	148
Lake Villa	13,278	15	1,992	40	5,311	45	5,975	1,586	238	634	714
Maple Park	3,104	32	993	26	807	42	1,304	255	82	66	107
Marengo	11,141	30	3,342	37	4,122	33	3,677	704	211	260	233
McHenry	11,820	30	3,546	35	4,137	35	4,137	1,583	475	554	554
Mount Morris	15,546	30	4,664	30	4,664	40	6,218	676	203	203	270
Pecatonica	4,000	33	1,320	31	1,240	36	1,440	938	310	291	337
Rochelle	20,901	29	6,061	26	5,434	45	9,406	1,307	379	340	588
Rock Falls	18,646	40	7,458	30	5,594	30	5,594	1,903	761	571	571
Rockford	227,930	15	34,190	58	132,199	27	61,541	17,088	2,563	9,911	4,614
Rockton	10,222	30	3,067	30	3,067	40	4,088	797	239	239	319
Shabbona	3,375	35	1,181	35	1,181	30	1,013	83	29	29	25
South Beloit	17,852	25	4,463	34	6,070	41	7,319	782	196	266	320
Sterling	38,414	30	11,524	30	11,524	40	15,366	3,012	904	904	1,204
Stockton	13,132	30	3,940	25	3,283	45	5,909	635	191	159	285
Warren	5,195	35	1,818	40	2,078	25	1,299	358	125	143	90
Waterman	6,148	35	2,152	25	1,537	40	2,459	190	67	48	75
Woodstock	24,229	25	6,057	50	12,115	25	6,057	2,633	658	1,317	658
Totals	642,983	22	143,812	44	279,749	34	219,422	50,942	11,457	22,498	16,987

Table E-5

ESTIMATED HOLDINGS AND ANNUAL ACQUISITIONS BY CATEGORIES
STARVED ROCK LIBRARY SYSTEM

Library	BOOK COLLECTIONS							ACQUISITIONS (1968)			
	Total	Adult Fiction		Adult Nonfiction		Children's		Total	Adult Fiction	Adult Nonfiction	Children's
		%	Vols.	%	Vols.	%	Vols.				
Earl Township	15,877	30	4,763	30	4,763	40	6,351	500	150	150	200
Marseilles	14,938	34	5,079	31	4,631	35	5,228	610	207	189	214
Mendota	13,383	15	2,007	50	6,692	35	4,684	1,026	154	513	359
Ottawa	52,984	18	9,537	47	24,902	35	18,545	3,137	565	1,474	1,098
Peru	22,717	15	3,408	55	12,494	30	6,815	1,889	284	1,039	566
Sandwich	15,185	20	3,037	35	5,315	45	6,833	435	87	152	196
Seneca	8,581	25	2,145	25	2,145	50	4,291	337	84	84	169
Spring Valley	10,074	25	2,518	50	5,038	25	2,518	574	144	286	144
Wenona	3,000	45	1,350	15	450	40	1,200	100	45	15	40
Wyanet	7,242	45	3,259	15	1,086	40	2,897	169	76	25	68
Totals	163,981	23	37,103	41	67,516	36	59,362	8,777	1,796	3,927	3,054

Table E-6

ESTIMATED HOLDINGS AND ANNUAL ACQUISITIONS BY CATEGORIES

SUBURBAN LIBRARY SYSTEM

Library	BOOK COLLECTIONS							ACQUISITIONS (1968)			
	Total	Adult Fiction		Adult Nonfiction		Children's		Total	Adult Fiction	Adult Nonfiction	Children's
		%	Vols.	%	Vols.	%	Vols.				
Bedford Park	6,026	25	1,507	40	2,410	35	2,109	1,128	282	451	395
Bellwood	41,135	16	6,582	37	15,220	47	19,333	4,807	769	1,779	2,259
Berkeley	8,424	20	1,685	10	842	70	5,897	683	137	68	478
Berwyn	68,961	20	13,793	40	27,584	40	27,584	4,864	972	1,946	1,946
Blue Island	31,051	25	7,763	35	10,868	40	12,420	4,008	1,002	1,403	1,603
Chicago Heights	50,461	14	7,065	42	21,194	44	22,202	5,644	790	2,370	2,484
Country Club Hills	7,391	20	1,478	35	2,587	45	3,326	1,501	300	525	676
Crete	9,066	25	2,267	23	2,085	52	4,714	2,299	575	529	1,195
Dolton	18,333	25	4,583	33	6,050	42	7,700	4,182	1,046	1,380	1,756
Downers Grove	57,162	19	10,861	44	25,151	37	21,150	5,885	1,118	2,589	2,178
Elmwood Park	33,041	22	7,269	40	13,216	38	12,556	1,801	396	720	685
Flossmoor	21,347	17	3,629	38	8,112	45	9,606	3,873	658	1,472	1,743
Forest Park	34,810	20	6,962	45	15,665	35	12,183	1,604	321	722	561
Hillside	10,784	23	2,480	20	2,157	57	6,147	2,137	492	427	1,218
Hinsdale	34,079	14	4,771	53	18,062	33	11,246	4,305	603	2,282	1,420
Hometown	9,518	19	1,808	33	3,141	48	4,569	1,930	367	637	926
LaGrange	41,864	25	10,466	50	20,932	25	10,466	4,084	1,021	2,042	1,021
Lisle	11,000	35	3,850	25	2,750	40	4,400	2,295	803	574	918
Lyons	16,322	30	4,897	25	4,081	45	7,344	1,912	574	478	860
Markham	8,528	20	1,706	30	2,558	50	4,264	3,528	706	1,058	1,764
Matteson	6,920	20	1,384	20	1,384	60	4,152	1,537	307	307	923
Maywood	40,746	20	8,149	35	14,261	45	18,336	3,714	743	1,300	1,671
Melrose Park	34,185	15	5,128	45	15,383	40	13,674	4,004	601	1,802	1,601
Midlothian	7,593	26	1,974	31	2,354	43	3,265	1,546	402	479	665
Northlake	15,000	20	3,000	30	4,500	50	7,500	2,398	480	719	1,199
Oak Forest	6,200	30	1,860	30	1,860	40	2,480	4,034	1,210	1,210	1,614
Oak Lawn	27,757	20	5,551	40	11,103	40	11,103	3,511	703	1,404	1,404
Oak Park	135,278	14	18,939	56	75,756	30	40,583	10,736	1,503	6,012	3,221
Orland Park	6,773	40	2,709	30	2,032	30	2,032	1,209	483	363	363

Table E-6 (cont'd)

Library	BOOK COLLECTIONS							ACQUISITIONS (1968)			
		Adult Fiction		Adult Nonfiction		Children's					
	Total	%	Vols.	%	Vols.	%	Vols.	Total	Adult Fiction	Adult Nonfiction	Children's
Palos Heights	8,057	25	2,014	35	2,820	40	3,223	1,050	263	367	420
Palos Hills	6,063	28	1,698	27	1,637	45	2,728	1,416	396	382	638
Park Forest	67,479	15	10,122	36	24,292	49	33,065	6,414	962	2,309	3,143
River Forest	26,857	15	4,029	49	13,160	36	9,668	2,233	335	1,094	804
River Grove	7,016	13	912	27	1,894	60	4,210	1,748	227	472	1,049
Riverside	32,426	20	6,485	55	17,834	25	8,107	2,742	548	1,508	686
Stickney	30,952	9	2,786	46	14,238	45	13,928	2,338	210	1,075	1,053
Tinley Park	10,620	30	3,186	20	2,124	50	5,310	1,356	407	271	678
Western Springs	31,963	20	6,393	43	13,744	37	11,826	3,292	658	1,416	1,218
Worth	8,749	22	1,925	37	3,237	41	3,587	1,604	353	593	658
Totals	1,029,937	19	193,666	42	428,278	39	407,993	119,352	23,723	46,535	49,094